

Workbench

November
December
1960

35¢
ICD

HAND SCREWS
AND
CLAMPS

Christmas Gift Projects

TOY TRAFFIC LIGHT
DOLL TRUNDLE BEDS
WHALE TOY CHEST
ROCKING ROCKET PLANE



FOR THE WORKSHOP

Contemporary
Bench-Chest

Rustic Pine
Bench

Picture Frames
with
Router Bits

Repairing
Shaky
Bannisters

Outdoor
Decorations

Aluminum
Christmas
Trees



BUY at WHOLESALE SAVE MAKE BIG MONEY!

Everyone Can Share the PROFITS!

SENSATIONAL! NEW! Everyone, everywhere can buy merchandise at true wholesale prices and make tremendous savings on personal needs or buy merchandise for resale and make huge profits. Study this ad carefully and notice how few of any items you have to buy in order to make big savings—and big profits. Order NOW! Moneyback guarantee protects you on everything you buy.

COMBINATION "ELECTRIC" LIGHTER and POWERFUL FLASHLIGHT



low as **45¢** EA.

Here's a unique, practical item—a battery-operated Cigarette Lighter and Flashlight in One! Cigarette lighters alone ordinarily sell for much more than \$1. But you can sell this combination lighter and flashlight for \$1 and make a handsome profit! Comes in rich, beautiful gold-colored metal case. Lightweight—fits easily in pocket or purse. Push one button for strong flashlight. Push another button and light cigarettes "electrically"! No fluids, no wicks, no flints. Operates on 2 tiny lightweight batteries. Supply is limited.

Order now at these special wholesale prices (without batteries):

1 dozen—\$7.20; 6 dozen—\$39.60; 12 dozen—\$72.00; 50 dozen—\$270.00. (Sample Demonstrator 79¢.) Batteries—90¢ per doz.

AUTOMATIC 2-HOLE NEEDLE THREADERS!

Guaranteed Lowest Prices in U.S. LOW AS

Demond for our hot new 2-Punch needle threader is so far above our expectations, that we're SHARING THE EXTRA PROFIT WITH YOU! Prices are slashed to an ALL-TIME LOW so you can sell them at 50¢ each and make a handsome profit, or \$1 each and make a killing! Sell to organizations, churches, carnivals, fairs, stores, homes, agents, etc. Our 2-hole needle threader threads any style, any size needle, virtually any kind of thread. Just drop end of thread in groove, push button—thread is threaded in one second! No frantic stabbing back and forth. No lost needle. ALWAYS WORKS!

28¢ EACH



ORDER TODAY AT THESE LOW PRICES . . . 1 doz.—\$4.75; 3 doz.—\$13.25; 6 doz.—\$23.50; 12 doz.—\$42.00; 60 doz.—\$207.50. (One sample demonstrator 59¢ or 2 for only \$1!)

Giant Plastic Sheet **40¢** EACH

A terrific seller at \$1.00 . . . with 150% profit on your investment! These are first quality, not seconds or throwaway! Huge, tough, durable transparent plastic sheets—all one piece, no seams. Waterproof, greaseproof, dirtproof, clean with a damp cloth. Protect rugs, furniture, and floors when painting. Perfect cover for cars, boats, bicycles, buggies, lawn furniture, power tools, appliances, etc. Make into tablecloths, aprons, lamp shades, appliance covers. Order now at these special low prices: 1 Doz.—\$5.50; 6 Doz.—\$33.00 per doz.; 12 Doz.—\$67.50 per doz. Sample only 65¢.



4 Color Pens DESK SET low as **31¢** EACH

DELUXE-QUALITY desk set containing FOUR smooth-writing ball pens, each in a different color—red, blue, black and green—with ink to match color of the pen . . . for just 31¢ in quantity for COMPLETE SET. Includes beautiful MARBLE-type base in which pens fit. Sell for \$1 and more than TRIPLE YOUR INVESTMENT. Order now at these low WHOLESALE PRICES: 1 doz.—\$4.80; 6 doz.—\$28.80 per doz.; 12 doz.—\$57.60 per doz. Sample Demonstrator 59¢.



BALL POINT PENS low as **3 1/2¢** Ea.

Everyone needs retractable ball point pens. At these low prices, you can sell at 10¢ and more than double your money . . . or 25¢ ea. and clean up! Sell to stores in quantity, to homes, offices, etc. Or, use as free gift. These quality pens are guaranteed to write as well as \$1 pens. Choose from black, red, blue, or green ink. Sample order—25 for \$1.00; 12 doz.—\$5.25. REFILLS—same choice of colors—40 for \$1.00; 12 Doz.—\$2.25.

EXTRAORDINARY LOW PRICES ON CLOSEOUT ITEMS!

Plastic Toaster Cover—was 50¢—now 19¢ ea.	French Fry Cutter—was \$1.00—now 49¢ ea.
Plastic Mixer Cover—was 50¢—now 29¢ ea.	Buttonhole-Maker—was \$1.00—now 19¢ ea.
Sugar Scoops—were 15¢ ea.—now 60¢ doz.	5-inch Pocket Comb—was 10¢
Plastic Pot Scraper—was 10¢ ea.—now 60¢ doz.	
Clothes Pins Aprons—were 50¢—now 29¢ ea.	Hostess Aprons—assorted patterns
Baby Dolls—were 25¢—now \$1.00 doz.	were 25¢—now 9¢ ea.
Jewelers' Silver Polishing Cloth—was 70¢—now 29¢ ea.	Pocket Protectors—were 25¢—now \$1.00 doz.
Plastic Tablecloths—54 x 54 in.—were 50¢—now 25¢ ea.	Steak Knives—Hollow Ground
12 Genuine Cotton Towels—were 50¢—now \$1.00	were 4 for \$2.00—now 6 for 98¢
Tomato Slicer—was 10¢—now 60¢ doz.	Pastry Cloth and Rolling Pin Holder—was \$1.00—now 49¢ ea.
50 Yards Lace—was \$2.00—now 89¢	Norelco Shaver—\$13.45
50 Spools Sewing Thread—98¢	Pinking Shears—98¢
Hand Sewing Machine—\$1.79	Salad Maker & Food Grinder—\$1.25

Low Cost

TRANSISTOR RADIO

with BUILT-IN LOUDSPEAKER & ANTENNA!



low as **\$7.00**

Complete

- Full Power
- All Stations
- Permanent Plastic Case
- 10-Day Free Trial!

Incredible but GUARANTEED true! Now you can buy a powerful new, precision-engineered, tiny (cigarette pack size) Transistor radio with built-in loudspeaker and built-in antenna for as little as \$7. COMPLETE! Other transistor radios with built-in loudspeakers and antennas sell for as much as \$60. But, because our factory produces thousands of sets monthly, they make tremendous savings which we pass on to you! These radios are complete—NOTHING MORE TO BUY. You'll be astounded at this set's power, clear tone, selectivity and sensitivity.

NEW CONCEPT IN RADIO MAKING!

This astounding radio is based on the same scientific discoveries that made possible the radios used in satellites speeding around the earth's atmosphere. Transistor radios far surpass old-fashioned tube sets because transistors COST LESS, are much MORE POWERFUL, and NEVER WEAR OUT! There are no tubes to break, none to ever replace . . . because there are no tubes!

This amazing, FULL-POWER set pulls in ALL STATIONS loud, and clear. Compare this to some sets—especially those with earphones—in which the sound is so weak you can hardly hear. The signal and tone of this set are like that of the finest sets in military use because its power plant is like that used in all radar equipment! TV sets, too. Then we strengthen the signal with the special boosting power of transistors.

TRY FREE FOR 10 DAYS! Use this set for 10 days. If at the end of that time you are not overjoyed, return in good condition and we will immediately refund your purchase price. You take no chances.

SUPPLY IS LIMITED ORDER NOW AT THESE SPECIAL LOW PRICES!

1/2 Doz.—1 Doz. \$7.50 ea.
1 Doz. or more \$7.00 ea.
Sample set \$9.95 ea.

WORLD'S LOWEST PRICED ALUMINUM XMAS TREE



We've scooped the world on brand new, lovely Aluminum Christmas Trees. Others charge \$5.00 or more for Aluminum Christmas Trees, but our price for big 2-foot-high Trees with full foliage as low as 90¢ each! Sell for up to \$2.98 each. Make a killing! Order today at these low prices: 1 dozen \$11.00; 6 dozen \$72.00; 12 dozen \$129.60. Sample only \$1.25.

low as **90¢** EA.

4 ft. \$5.19 6 ft. \$8.79
Multi-Colored Revolving Spotlight \$8.88

SELL CUCKOO CLOCKS ON NEW, NO-STOCK-TO-BUY and NO INVESTMENT PLAN! MAKE A KILLING!



Cuckoo Clocks sell for up to \$25.00. We're first to offer deluxe Cuckoo Clocks to Agents to be sold for \$1.95 each—without your buying stock—and enabling you to make 100% profit on each clock sold. Come with weight and pendulum movement. Marvelous timekeeper in HAND-CARVED antique Walnut finish. Cuckoos cheerfully every 15 minutes. Mailed direct from German Black Forest. Fantastic new plan now ready. All you do is take orders. You buy no stock and make no investment. When you become our active agent you sell clocks for \$4.95 each and make 100% profit on each clock sold—because you send us only \$2.45 for each clock you sell—you keep \$2.50. Write for free details or to save time, send only \$3.19 for sample.

low as **\$2.45** EA.

LOW-COST HIGH-QUALITY 9-VOLT TRANSISTOR RADIO BATTERIES SELLING LIKE WILDFIRE!



There is a tremendous demand for 9-Volt Transistor Radio Batteries because of millions of Transistor Radios on the market. Others charge \$1.25, or more for 9-Volt Batteries for Transistor Radios, but we buy from factory in huge quantities and enable you to make big profits selling batteries at very low cost. Our batteries are brand new, fully charged. Order NOW, at these low prices: 1 dozen \$1.75; 6 dozen \$9.00; 12 dozen \$18.00. First sample 49¢ each. Money-back guarantee.

low as **35¢** EA.

MONEY-BACK GUARANTEE COUPON

L & M Co., Dept. WH-40, 415 N. 8th, St. Louis, Mo.

Please send my order FAST! You guarantee to please or I get my money back when I return merchandise. I enclose \$_____.

Send my order C.O.D. I enclose 25% or \$_____ I will pay postman balance of cost plus postage fee when my package arrives.

QUANTITY	ARTICLE	PRICE

* Send additional order on separate sheet of paper.

* Big FREE Catalog Sent with your order!

* Visitors Welcome

Please PRINT Name

Address

Town or City

Zone

State

BARGAINS!



IMAGINE GETTING BANKRUPT, CLOSEOUT, BUYS SUCH AS THESE!

- \$1 Val. Chlorophyl Tablets, 7½c pkg.
- 15c Textile dyes, 3½c pkg.
- \$12.95 Val. Name brand Kitchen set, \$3.25
- \$4.98 Port. Washing Machine, 20c.
- POSTAL SCALES, 7½c each!
- \$2.98 Horserace game records, 30c ea.
- \$1.95 Ret. Men's silk ties, 12½c each!
- PENCILS, 144 for 57½c!
- 69c Ret. Insect Repellent, 5c each!
- CHRISTMAS SEALS, 25c per 1000!
- ENVELOPES, 50c per 1000!
- 35c DRESS PATTERNS, 3c each!
- Calendar Wrist Watches, \$5.00 each!
- \$10 Ret. Men's Toiletry Sets, 60c each!
- New Bobby Pins, 70c per 700!
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- \$1.75 Rudolph kids toiletry sets, 35c.
- NEW HAIRNETS, ½c each!
- \$1 Retail Automatic Card Shufflers, 9c each.
- 39c Under Arm Deodorant, 2c jar!
- 25 card asst. Xmas cards, 11c box!
- 50c Everyday greeting cards, 7½c box!
- Govt. Surplus Typewriters, \$23.
- \$1-\$3 Hard covered books, 20c each!
- 49c Retail Xmas window decorations, 10c per set.
- \$49.95 Ret. 7x50 Binoculars, \$12.95.
- \$15 Retail Electric Percolators, \$5 ea.!
- New Phono Records, 45 & 78 RPM, 7c each.
- BUTTONS, 144 for 25c.
- CIGARETTE HOLDERS, 1c each.
- \$1 Kiddies Handbags, 3c each.
- \$1 Val. Billfolds, 15c each.
- \$2.50 Val. Wallets, 30c each.
- LADIES APRONS, 6¼c each.
- D. E. Razor Blades, \$1.50 per 1000 blades.
- \$1 Mufflers, Scarfs, 12½c each.
- Plastic Toy Guns, 2c each.
- 25c Rudolph Reindeer brooches, 2c each.
- 69c Insect Repellent, 5c each.

(Above bargain list merely illustrates type of Bargains usually found in this paper. Lists Naturally change from month to month.)

PLUS HUNDREDS OF OTHER SENSATIONAL BUYS!

ONLY IN "BARGAINS" WILL YOU Find Every Month Similar—

- **BANKRUPT, CLOSEOUT, SURPLUS BARGAIN OFFERS** • **BARGAINS AT WHOLESALE**
- **BELOW WHOLESALE** • **RARE MONEY MAKING OFFERS** • **New and Unusual Item Information**

ONE issue of this SENSATIONAL Publication can make or save you MORE MONEY than the COST OF THE ENTIRE SUBSCRIPTION! This is the ONLY Big National paper of this type in circulation! You'll be AMAZED, FLABBERGASTED and DELIGHTED at the wonderful listings in every issue!

Toys, Books, Jewelry, Greeting Cards, Cosmetics, Household Merchandise, Appliances, Industrial Materials, Machinery, Tools, etc.

Bargains as low as 10¢-25¢ on the Dollar!

MAKE FANTASTIC PROFITS!

It's HARD to believe, but IT'S THE TRUTH! Terrific Bargains can save you 40%-80% or more on every dollar you spend!

BUY CHEAP—SELL CHEAP! That's why thousands of smart salesmen, store owners, jobbers, etc. buy this paper! They know where to buy at CHEAPEST PRICES! NO REASON why YOU can't DO THE SAME! Many articles, features every month show you HOW to sell bargains for big profits—if you don't know how!

ONLY PAPER OF ITS KIND AVAILABLE!

Search your newstand high and low. YOU WON'T FIND ANOTHER PAPER ANYWHERE LIKE IT! "Bargains" is available by SUBSCRIPTION ONLY. It's the only paper we know in existence that actually lists Bankrupt, Closeout, Surplus offers every month. Bargains so rare and terrific, you'll blink your eyes in amazement!

How To Buy! How To Get Ahead!

"BARGAINS" also features pages of interesting articles + features on how to buy wisely; How to add to your income; How to make spare time profits.

BIG 1960 CHRISTMAS ISSUES!

SAVE Up to \$1000—EARN Up to \$3000!

Your subscription will automatically include the BIG 1960 CHRISTMAS ISSUES—just in time for the big holiday season. Special issues jammed full of amazing holiday bargains. Imagine being able to buy \$1.00 worth of goods at 15c, 25c or 35c.

We HONESTLY think it's possible for you to do this within a year's time. For PROOF... see testimonial letters... or better still, PROVE IT FOR YOURSELF BY SUBSCRIBING.

JUST \$2.00 FOR 12 BIG ISSUES!

Reg. Price is \$3.00 per year, BUT YOU CAN STILL BUY 12 BIG ISSUES FOR \$2.00! Just 18¢ per month! Save yourself \$1.00 by subscribing now. AND SEE OUR AMAZING MONEY BACK IF NOT PLEASED OFFER BELOW! Act Fast, this offer is subject to withdrawal at ANY TIME!

"BARGAINS"

Box 591-EH, Lynn, Mass.

O.K. Here's my \$2.00 for 12 BIG ISSUES. Rush me first copy! Canada \$2.50, Foreign \$3.00.

Name.....

Address.....

City..... State.....

Remember! Your Money Back IN FULL if the 1st issue that you receive doesn't please you!

Your Money Back IN FULL if the First Issue Doesn't Please You!

WHAT CAN YOU LOSE? If you are not delighted with your 1st issue, you can have your money back IN FULL! No quibbling about it either! CAN WE MAKE A MORE STRAIGHT-FORWARD OFFER THAN THIS?

"BARGAINS", Box 591-EH, Lynn, Mass.

Look What Subscribers Are Saying!

Here's What Subscribers say about "Bargains"

After Receiving Their first copies!

"... Your book BARGAINS is just wonderful and I am very glad I subscribed to it."—H. K., Port Monmouth, N. J.
 "... As a result of answering one of the ads (in Bargains) it has resulted in extra profits of \$40.00 and upwards per month."—J. H., Alabama.

"... Saw your wonderful paper and enjoyed every bit of its reading and adv. It's a Great Paper."—M. S., Vermont.

"... I am very pleased with BARGAINS. I have never seen anything like it and am looking forward to my future copies especially the Christmas edition."—Mrs. D. M., Maine.

"... Received my first issue of Bargains and may I say it is a great magazine."—M. H. C., Alabama.

"... I think BARGAINS is the best merchandise publication I have ever seen (And I have seen hundreds)."—S. P. C., Brooklyn, N. Y.

"... Received my 1st copy of BARGAINS the other day and am very pleased, the information you publish may be just the 'shot in the arm' my business needs."—D. S., St. Albans, N.Y.

"... I have found your magazine very helpful."—W. A. P., Ogdensburg, N. Y.

"... Received your paper. Thank you very much. It is one of the finest we have ever seen."—F. D., Iowa.

"... I was the recipient of my 1st copy a few days ago. I am completely satisfied with the periodical. I also wish to express my appreciation to you for having made the magazine available to me. I shall be pleased to continue my subscription as long as the magazine is available."—W. S., Wash.

"I have been a subscriber of your 'Bargains' magazine for nearly a year, and very much pleased with it. I wouldn't want to miss a copy of it. So I am sending in the valuable coupon you sent me with \$2.00 in cash. I am so glad to be one of your subscribers."—Mrs. E. L., Richmond, Calif.

PLUS MANY OTHERS!
 THE ABOVE LETTERS WERE NOT SOLICITED IN ANY WAY OR MANNER—ALL ARE IN OUR OFFICE FILES! They are the enthusiastic reaction of subscribers after seeing their first copies of BARGAINS!

ELECTRO FOOT WARMER

WARM FEET on Cold Floors
...at Home, Office or Factory



No longer do cold floors mean cold feet... and attendant aches, pains, colds, etc. You'll be amazed at how cozy and warm your feet will be in those hard-to-heat places in Offices, Home Workshops, Service Stations, Parking Lots, Shipping Rooms, etc. Completely molded of rugged, non-odorous rubber, this all new heating pad is completely safe in water. Wet feet won't bother it — washing will keep it clean. Size 14" x 20 1/2" with 6 ft. of U.L. Approved cord and molded plug... **\$895**
Plus 35c pp. & hdlg.

ONLY 75c EACH

For the FINEST QUALITY Imported
PRECISION PLIERS

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FOR JEWELERS, OPTICAL WORKERS, HOBBYISTS, CRAFTSMEN OF ALL KINDS! These superb European instruments are of deep-forged, heat-treated high quality tool steel, fabricated to most exacting specifications. All-over ground and polished to smooth hard surfaces. Smooth working joints with just the right tension. Jaws meet perfectly to safely and securely hold even the most delicate objects in the hard-to-reach corners and angles. Each plier is 4" long and a veritable gem of precision and strength.

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In Handy Fold-A-Way Pack

One of the most comfortable, toughest wearing coveralls available anywhere! Custom designed one piece, roomy cut tear-resist construction. Full length zipper — goes on and off in an instant! It's rugged, durable, lightweight, 100% waterproof! Not affected by oil, grease, mildew, or ordinary chemicals. Guaranteed not to crack, stick or peel in temperatures as low as 30 degrees below zero.

Specify size desired— **\$398**
Small, Medium, Large
Plus 25c pp. & hdlg.



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Amazing New Tool
for Making Patterns
to Fit Any Irregular
Shape!

This handy new tool gives accurate measurements of hard to fit contours in an instant. Saves hours of time — assures perfect work without waste. Simply lay "Quickfit" against object to be fitted, push the sliding fingers into each groove or notch, snap lock — and presto, you have a perfect template to lay out your work. There are 16 solid lifetime aluminum "fingers" per inch — over-all size 10" x 4 3/4" x 3/8" **\$595**
ppd.

Completely
Adjustable



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For Shop, Inspection Bench, Machine
Tool, Laboratories

Swivels and angles in any conceivable direction. Guaranteed to hold your light exactly where you want it because 3 arms (2 — 12" and 1 — 10") adjust on 3 ball joints. Easy to mount anywhere. Takes up to 100-watt bulb. Has 8-foot long-wearing neoprene cord & plug. Finished in pale green with reflective white enamel interior reflector. Shade is permanently attached to support arm so it cannot come off or pull bulb socket apart **\$595**
Plus 50c pp. & hdlg.

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Remove paint and varnish from wood & hard board quickly, easily and economically. This ingenious attachment will fit any size home tool. Less expensive and more efficient than sanding discs. Works indefinitely without deterioration. The 4" diameter perforated metal disc eliminates clogging. Complete with cooling fan and arbor assembly only. **\$249**
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Send check or money order. If COD, fees extra. Money Back Guarantee.

SCOTT MITCHELL HOUSE, INC.

Dept. W-11, 415 South Broadway, Yonkers, N. Y.

WORKBENCH

volume 16 • number 6

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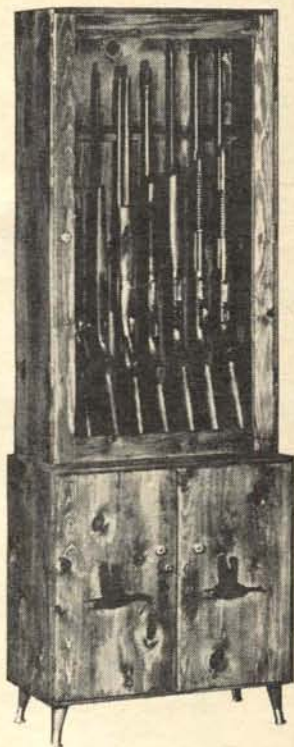
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**USEFUL!
PRACTICAL!
FUN TO
ASSEMBLE**

KNOCKDOWN KITS THAT ARE KNOCKOUTS FROM GILES & KENDALL

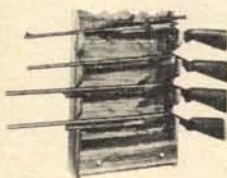
Use the coupon below to get your copy of the Giles & Kendall Company colorful new catalog.

Over 50 items to choose from. All are pre-cut. There's no waste. Hardware included. Easy to follow instructions.



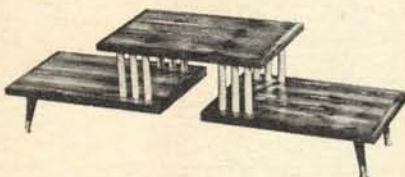
GUN CABINET NO. 707

The knotty pine "Pioneer" gun cabinet holds eight guns. Bottom storage compartments for ammunition and other equipment equipped with two locks. Brass ferrules on legs. Overall size 27" wide, 15½" deep, 83" high. Glass for door not included.



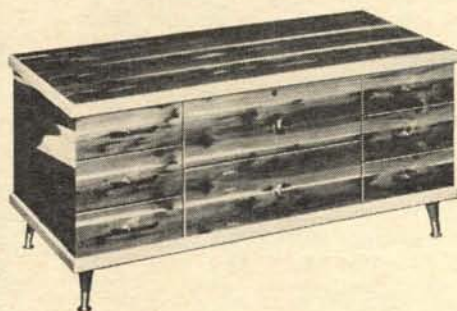
GUN RACK NO. 404

This four gun rack with full width drawer for ammunition and cleaning gear is all cedar. Comes complete, ready to assemble with all screws, brass pulls and safety lock. 32" high, 21½" wide.



COCKTAIL TABLE NO. M-17

Solid cedar. Top is 20" wide, 44" long. Stands 15" high. Complete with all hardware including brass ferrules for legs.



GENUINE CEDAR CHEST NO. 909

The "Astronaut" with simulated drawers and brass pulls has a handsome, modernistic style. Cedar legs have brass ferrules. Size 20" wide, 46½" long, 21" high. Five ply top and front.



LIMED OAK CHEST NO. 999

The "Rocket" limed oak chest has a cleverly designed front of simulated drawers with attractive brass pulls. Modernistic legs with brass ferrules. Size 20" wide, 46½" long, 21" high. Five ply top and front.

Giles & Kendall Co.
Box M
Huntsville, Alabama

Please send me your new catalog of "do-it-yourself" items of Genuine Tennessee Aromatic Red Cedar and other woods. Enclosed is 25¢ (coin or stamps) to cover mailing and handling. I understand this amount will be credited on my first order.

Name _____

Address _____

City _____ State _____

GILES & KENDALL CO.

BOX M

HUNTSVILLE, ALABAMA

LETTERS TO THE EDITOR

Dear Mr. Hedden:

Just finished reading a letter written by Mr. Alan B. Walker of Australia, and your answer to him.

As a person who has been making marquetry pictures for almost seven years, I am going to defend the name used by Mr. Walker. It is possibly correct to call all this type of work inlay if we consult some dictionaries, but to those of us who do the work, we feel that there should be a separation of types. Inlay means that a groove or space has been cut in a table top or piece of wood and something inserted. Marquetry, as it is now practiced is made from veneers 1/28 in. thick, and all pieces are cut out and fitted together and glued to a flat surface. The finished picture produced from inlaying and from marquetry will look alike, but the methods are different.

I am a member of the International Wood Collector's Society, and quite a few members list their hobby as marquetry. As a matter of fact, several months ago one bulletin was dedicated to members who practiced marquetry, and there were several full-page articles about this work. Victor E. Carlson, San Diego, Calif.

Dear Mr. Carlson:

Get two or more woodworkers together, drop this subject into the conversation and you will get a heated debate. Incidentally, we will have a story in a future issue on assembling a kit to make an inlaid picture (actually marquetry, as the pieces cut from veneer stock are cemented to a board). While assembling a kit with pre-cut pieces may not be a challenge to long-time practitioners of marquetry, it is an excellent way of introducing a fascinating hobby, and does show the limitless possibilities of inlaying—marquetry, if you prefer that term.

Mr. Walker might appreciate knowing of the Wood Collector's Society. Why not write and tell him about it?

Dear Editor:

Regarding the Workshop Intercom in the Sept.-Oct. issue on page 64:

I have had a kitchen-to-basement Workshop Intercom for nearly 15 years, but my installation is the reverse of the one described. The master unit is in the shop. When I go to the basement, I turn on the set and I can hear the kitchen clock and any program on the kitchen radio. If the radio program is not to my liking, I simply press the "talk" switch and

ask my wife to turn on the record player so I can have music.

When it is time for supper (which usually comes too soon) my wife just steps near the kitchen unit and calls me in her natural voice.

T. E. Dickenson, St. Paul, Virginia.

Mr. Dickenson:

Believe we will change our setup to match yours, that is, if the wife doesn't object too strongly.

Dear Sir:

In reference to the letter from Roy K. Parks of Columbus, Ohio, in the Sept.-Oct. issue, the following information is submitted:

A mechanic's magazine of May, 1956, carried detailed plans for building a humidity-controlled electronic switch, for which the cost of the parts was about \$17.00. It might be less expensive for Mr. Parks to buy one already made, and the following 3 are available from the Harry Alter Co., Inc., 1717 S. Wabash Ave., Chicago 16: Bendix Friez Humidistat, 1/6 HP cap., range 20 to 80 per cent, has a 3 per cent accuracy at a calibrated point of 65 per cent. Cost is about \$10.00. Minneapolis-Honeywell Regulator Co., MH 45A, rated at 3.2 amps at 115 volts AC, cost about \$9.00. Penn Refrigeration & Air Conditioning automatic-control type 842 for use on low-voltage control systems only. Has range of 30 to 70 per cent, with differential of 4-1/3.

Yours truly, Robert P. Kirk, Col. Inf., U. S. Army

Dear Col. Kirk:

Many thanks for your information about automatic humidity switches. It truly would seem less expensive to buy a ready-made switch than to make one. Besides your suggested source in Chicago, it is quite likely that local electric-supply houses might stock the switches.

... in answer to the letter in the Sept.-Oct. issue about humidifier controls, they can be purchased wherever refrigerator parts are sold. Four of the controls are listed in the Harry Alter Co., Inc. catalog. The address of the company is 134 Lafayette St., N. Y.

John Marshall, Princeton, N. J.

Thank you, Mr. Marshall, for the information. From the letters we received on this subject it is very apparent that WORKBENCH readers are well informed on sources of supplies for many items.

Dear Sir:

Just finished looking over your Sept.-Oct. issue. Fine magazine. The idea of putting earphones into the sound system of a TV set you had in an earlier issue was the best one yet. Did you know you made a mistake in the article on Venetian Blind Radiator Covers? If you cut slots like the drawing shows, all four sides will be just alike. Two sides will have to be cut with opposite angles. Thomas E. Clarisse, Sr., Gulfport, Miss.

Dear Mr. Clarisse:

Yes, we goofed. Here is an operation we should have checked out in the Model Shop, but didn't have time. Slots would have to be cut at the opposite angle to produce matching pairs.

Dear Mr. Hedden:

In the Sept.-Oct. issue of WORKBENCH on page 24 is a plan for an expandable table. I am so pleased and excited over this plan I can scarcely wait to make it. I have been looking for such a plan for fifteen years. A second plan I have been looking for is for folding chairs to match the table. A third, to complete the ensemble, would be for a cabinet or rack to hold the chairs when folded. Do you have such plans? If not, I hope they are acquired and printed soon.

Mrs. Compton, Davenport, Iowa.

Dear Mrs. Compton:

We are happy you liked the table, which seems quite popular with our readers. At the moment we do not have plans for folding chairs, or for a cabinet to hold them. However, if we receive enough requests, we will investigate the possibility of having designs made.

Dear Sir:

Enjoy seeing snapshots of projects made by readers in your "Letters to the Editor" column. Can anyone send pictures?

Mr. T.T.J., Atlanta, Ga.

Dear Mr. T.T.J.:

If you have clear snapshots of projects you have built from plans in WORKBENCH, or from your own designs, please send them along. We are delighted to have them, and will print them in this column when we get them.

Jay W. Hedden

Jay W. Hedden, Editor

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keeping up with craft and home products

In communicating with companies whose products are described in this department, please mention **WORKBENCH**.

CORRECTIONS

The address of the Magnolia Machine Works, source for DoorBrakes, as listed in Sept.-Oct. should be Elizabeth, New Jersey, not New York.

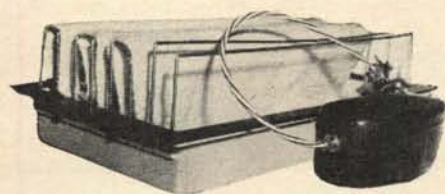
Price of Life-Size Skull Model, listed in Sept.-Oct., from Edmund Scientific Co., is \$4.95.

Night-Driving Glasses



EYE STRAIN AND FATIGUE caused by driving at night against the constant glare of oncoming headlights are almost completely eliminated by wearing "Glare Bar" glasses that have lightly-tinted lenses. Our tests showed them to be equally effective for watching television and for reducing the light glare when attending nighttime sports events. In large and medium sizes in metal frames, also in clip-on style for those who wear glasses. Cost is \$2.98 a pair from M & M Quality Prod., P. O. Box 788, Itasca, Ill.

Inexpensive Humidifier



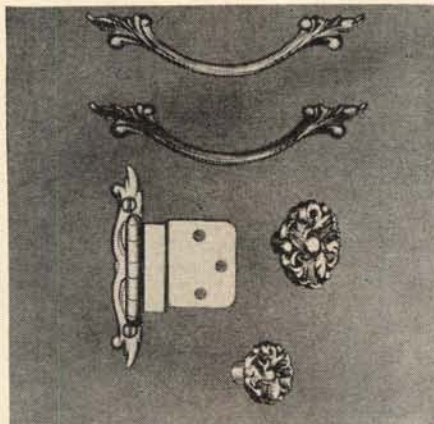
EASILY INSTALLED IN THE DUCT of any circulating-air furnace, a new humidifier unit uses a cloth wick that can safely evaporate 8 to 10 gal. of water daily. The wick can be washed to restore it to full efficiency. Constant automatic water fill assures trouble-free operation. A clear-plastic window provides ready visual check and easy access to the unit. For information write to Terry Vap Co., 750 Pelham Blvd., St. Paul 14, Minn.

Heavy-Duty Solder Guns



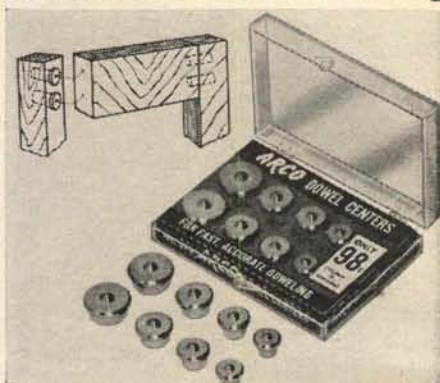
ALLOY TIPS on these new solder guns do not pit or soften and bend from heat. Tips are cleaned easily with damp cloth when necessary. Two models of guns are available, one having a single heat range, the other having two. Each gun has shadowless light built in, and storage space in the handle for extra solder. Without case and accessories single-heat gun is \$14.95, double-heat gun is \$16.95. Cummins Portable Tool Co., Div. John Oster Manufacturing Co., Milwaukee 17, Wis.

Provincial Cabinet Hardware



COMPLEMENTING A DEFINITE TREND toward "Period" and "Provincial" styling in kitchen cabinets is this new line of hardware. Pulls with 3-in. centers, matching knobs and semi-concealed hinges are available in Antique English, Antique Copper, Antique Silver and Ivory Gold. Amerock Corporation, 4000 Auburn St., Rockford, Ill.

Aid For Accurate Dowelling



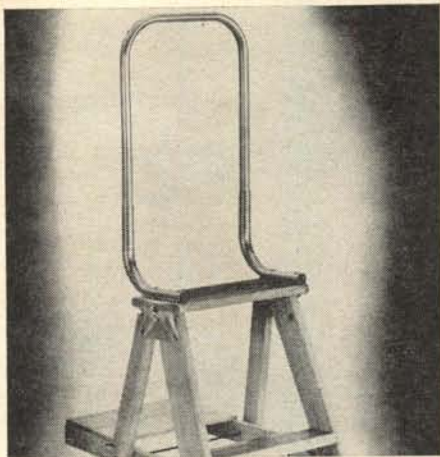
HOLES ARE DRILLED at desired locations in one piece, then centers are inserted and matching members are pressed together and tapped lightly. Punch marks indicate exact centers for drilling opposite dowel holes. Set has 8 centers, two each 1/2, 5/16, 3/8 and 1/4 in. 98 cents postpaid from Arrow Metal Prod. Co., Dept. WB-DP, 421 W. 203 St., N. Y. 34.

Electronic-Organ Tuner



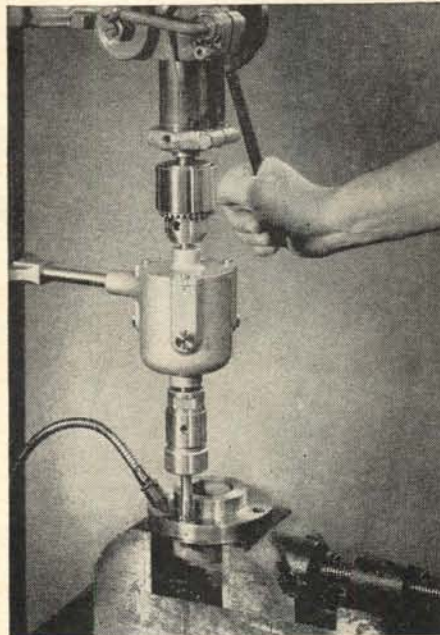
PROVIDING ACCURATE PITCH to 1/100 semitone, finer than the human ear can hear, this device tunes an electronic organ by means of a stroboscopic unit. Connected to the organ output, or to its own microphone, the unit permits tuning an organ with the playing of just 12 notes. Small enough to be carried in a pocket or stored in organ bench, tuner is \$49.50 in kit form, \$69.50 fully assembled. From Schober Organ Corp., 43 W. 61st St., N. Y. 23.

Ladder Guard Rail



MAKE THE UPPER STEPS of your step-ladder safe with this handrail that attaches easily to any ladder. Provides a 20-in. extension above the ladder top, removes from sockets when ladder is stored. \$2.98 ppd. Goode Prod. Co., Dept. DJ, 7542 Maie Ave., Los Angeles 1.

Drill-Press Tapping Attachment



DESIGNED TO FIT any drill press, a new attachment will accommodate taps from 0 to 1/2 in. Unit contains 4:1 planetary-gear reduction system that transmits power to forward and reversing-clutch members by means of a bevel-gear train. When thrust is down, clutch engages and drives tap into work; when drill-press lever is raised, reversing gear engages and backs out tap. Two models of unit differ in chuck, one being No. 2 Morse Taper, other straight shank. Supreme Products Corp., 2222 S. Calumet Ave., Chicago 16, Price \$63.

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HUNDREDS OF THINGS to do and make FOR FUN AND PROFIT

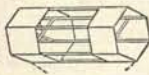
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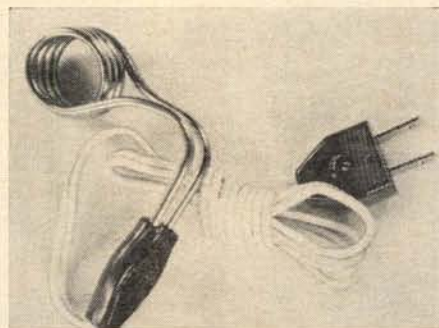
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WHETHER REFERENCE BOOKS or materials, anything from metals and plastics to artificial flowers, sea shells, rattan, clays and other pottery supplies are listed in "Where to Get What," a directory of crafts and art

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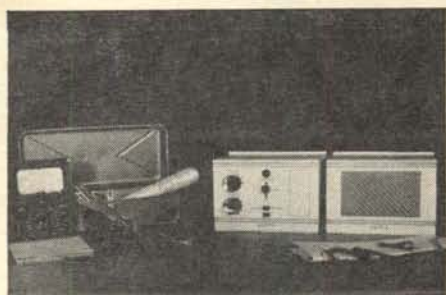
ADJUSTABLE CLAMP CO.
415 N. Ashland, Chicago 22, Ill.



PATENTED Cut accurate lengths with PATENTED L. Stahli's No. 21 Adjustable Stop Gauge

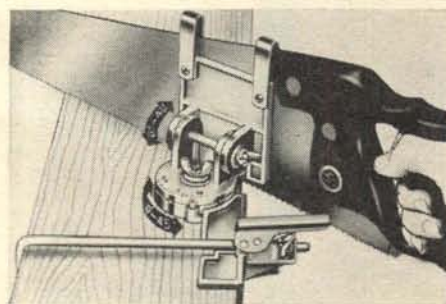
Cut stock to precision lengths on bench or radial saws. Graduated scale sets easily, assuring fast accurate work. 10 days free trial with money back guarantee. At your dealers or send \$5.95 today. Postage prepaid. No C.O.D.'s. Free brochure on request. Dealers inquiries welcome. Dept. WB, L. Stahli Mfg., 3166 Wadsworth, Saginaw, Michigan.

Electronic-Training Kits



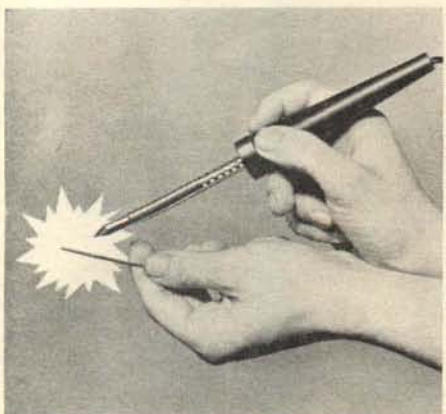
EDUCATIONAL KITS start with No. 1 that contains tools, instructions and parts to build test meter. Succeeding kits run through 2-station intercom to Hi-Fi, stereo, telemeter and finally an electronic brain. Each kit is recombined with subsequent units to keep down cost and avoid duplication of parts. First kit is \$25.50, estimated cost of largest kit is \$60.00. Strato Engineering Co., Inc., 1843 Empire Ave., Burbank, Calif.

Compound-Miter Gauge



SMALL ENOUGH TO BE CARRIED in a tool-box, this device replaces a miter box, assures accurate cuts from 45 to 90 deg. in two planes for compound miters. \$6.95 ppd., Nielsen Saw and Mfg. Co., P.O. Box 277, Matteson, Ill.

Miniature Soldering Iron



WHEN THE TIP of most low-cost soldering irons burn out, the iron must be discarded. Not so with this inexpensive unit that has a replaceable tip. Operates on 110-volts AC/DC, weighs just 8 oz. Price is \$2.00 from Solder-Mite, WB-10, 1270 Broadway, N. Y.

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The finest hammer made. All-steel, perfectly balanced, non-slip grip.



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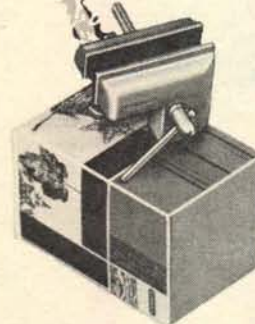
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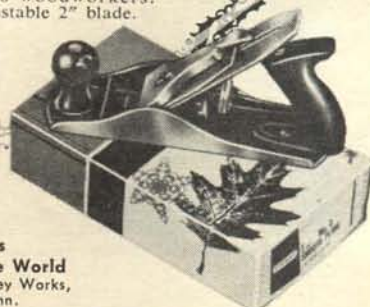


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ALUMINUM CHRISTMAS TREE

BEAUTY COMBINES with practical design in the tree shown on our cover and on this page. Its all-metal branches are fireproof, and the tree can be "painted" with colored floodlights. Our step-by-step photos show the tree assembly from carton to finished beauty. Reynold's Aluminum is used for this stainless-aluminum tree made by Aluminum Specialty Co., Manitowoc, Wis.



2. Tree comes in compact carton that also is used for storage of tree during the year. Available in five sizes from 2 to 8 ft., in pink, green and gold, as well as natural silver.



1. Ornaments can be hung on tree, using standard hooks that will not damage branches. Although low-voltage lights can be used, floodlights are recommended because of danger of short-circuit in all-metal tree from defective wiring.



3. Two sections of trunk (small trees may have one section) are assembled, fitted in stand provided. Individual branches are taken from paper sleeves, fitted in holes in trunk. Sleeves are saved for re-use.



4. Assembly of tree is from top down. Note how angle of branches changes to give natural look. Stand is provided in kit. Disassembly of tree is just reverse of assembly, starting at bottom, going up.



5. Last branch fitted in place, tree is ready for decorations. Off-tree lighting is recommended for safety and to take most advantage of shimmering, highly-reflective surfaces of the many, feathery branches.



This plain brick wall and doorway are decorated with festooning, ribbon, garden lanterns, PAR lamps, Christmas lamps and a star burst. The idea is to use readily available material to create different, yet tasteful Christmas decorations.

Outside Decorations

Photos courtesy General Electric Co.

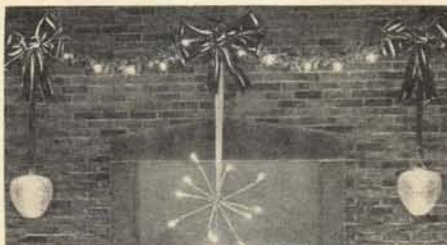
DIFFERENT, YET TASTEFUL and simple are these outdoor Christmas decorations that are made from readily available materials and lights. Every home, of course, will present different problems. On the house shown it was necessary to use lengths of dowel or aluminum tubing clamped or wired to the eavestrough to support the wires on which the festooning and lights are suspended. If a house has overhanging eaves, this would not be necessary. The suspending wires could simply be stapled or nailed to the underside of the overhang.

Ordinary garden lanterns—sometimes called "Japanese" lanterns—are used for the Christmas decorations. Colored lamps can be used inside them, or even twinkle lights. The star burst shown is made from

welding rods. Lengths of coat hanger wire also could be used. The cord is looped down each length of rod, then the cord and rod are wrapped with tape. A pin-on light is attached to each loop. These are clear lamps to give a "star" effect, and can be twinkle lights if desired. The festooning can be purchased at large stationery stores. Heavy tinsel strands could be used in place of the festooning, if strung on flexible wire that would provide the required strength. The large bows are cut and shaped from sheet plastic; they also can be purchased ready-made at some stores. Weathertight PAR lamps are used to highlight the wall of the house, being hidden behind shrubs. A PAR lamp accents the door, to add a special invitation to holiday guests. In the latter highlighting, it might be a good idea to check the condition and appearance of the door and frame. A little calking, plus a fresh paint or varnish job, might be necessary to make the door look its best. △ △

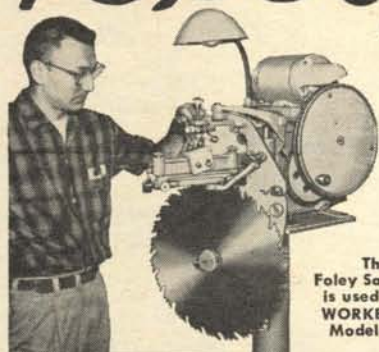


Clear-glass lamps are used in festooning around door, with an occasional twinkle lamp to add interest. PAR lamp at lower right is used to highlight the door and the huge red ribbon.



Close-up of display shows garden lanterns, and star burst made from welding rods. Clear lamps on star burst contrast with colored twinkle lights that are used inside the white lanterns.

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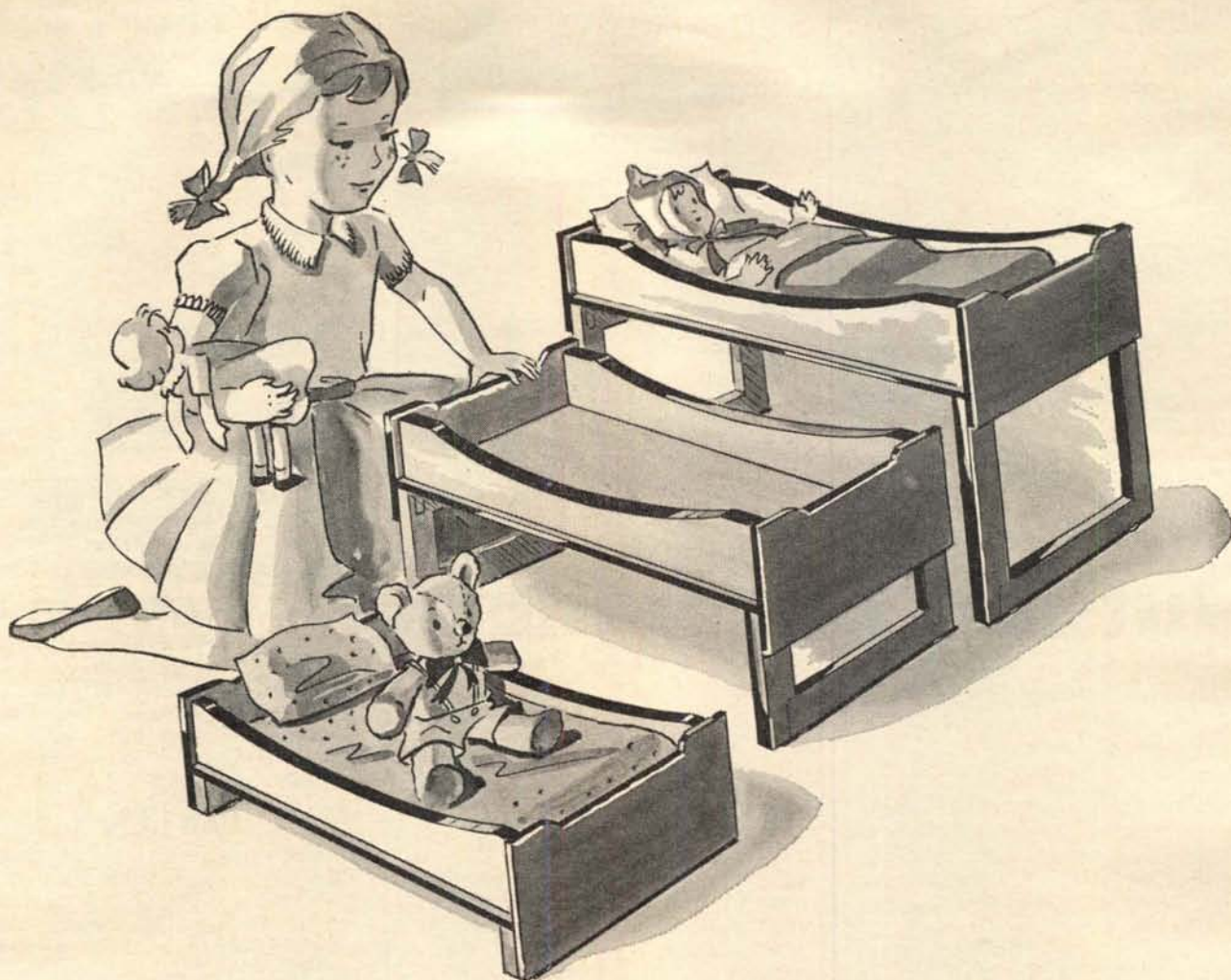
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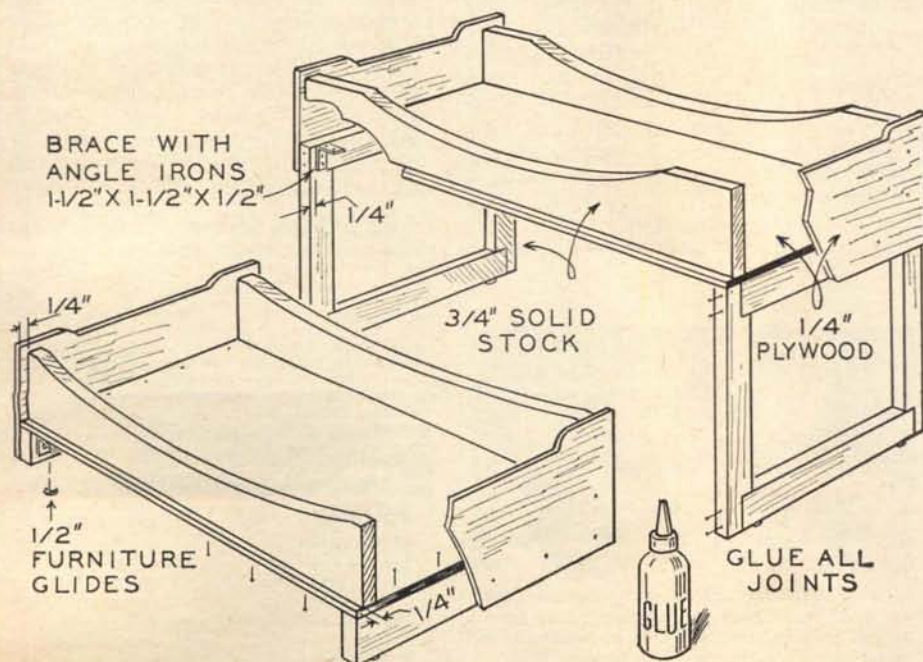
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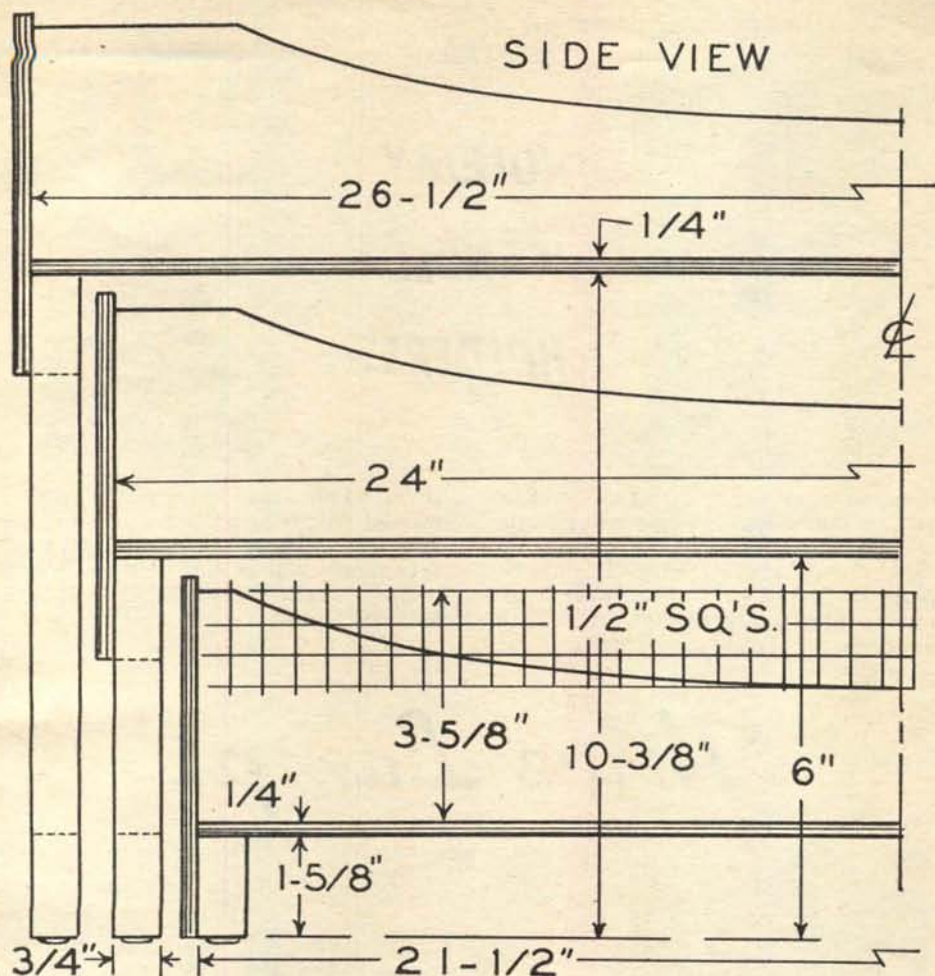
UP-TO-DATE DOLL BEDS

Roberta Fairall



LACK OF LIVING SPACE for her dolls may become a problem for the young lady of the house when Santa brings one or two new members for her family, but Dad can make these trundle beds as his personal gift to help solve the problem. Depending on the girl's age, the beds can be finished in two different ways: For a very young child, paint the beds three different colors. Blue for the large bed, yellow for the middle-size and red for the smallest. The paint should be a bright, wear-resistant enamel. For an older girl, the beds may be stained and finished to match her own furniture. Either way, only a few scraps of $\frac{1}{4}$ -in. plywood, some strips of 1 x 2 and 1 x 4 lumber are required for construction of the beds.

Begin by drawing a pattern on cardboard for the top curve of the sides as shown on the $\frac{1}{2}$ -in. squares. This is the only pattern that will be

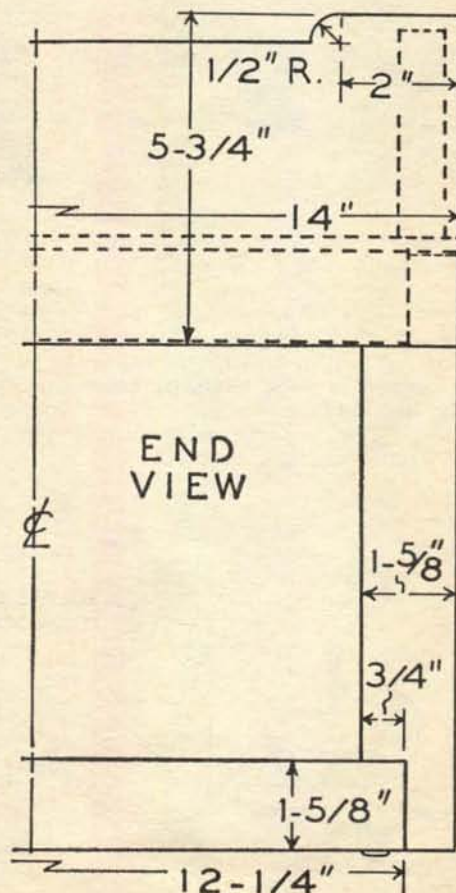


required, and it is used for all three of the beds. Start by cutting all parts for all three beds; the bottoms, sides and ends. Assemble the parts with brads or small nails and glue. Next, assemble the frames that form the legs. The beds now are ready to be attached to the leg units. Brace them with small mending angles and tap on the chair glides. Use sandpaper to round all edges and sand all surfaces smooth. Use a good quality sealer or undercoater, and when it is dry, resand all surfaces to remove any raised grain or wood fibers.

With the modern penetrating, or sealer-stains, almost any wood can be colored to appear to be a hardwood. This makes it readily possible to simulate maple, walnut, or any wood that you wish to match. Note in the drawing that where 3/4-in. solid stock is called for, that this is standard 1-in. lumber. The actual finished dimension of 1-in. stock is approximately 3/4 in.

Mattresses for the beds can be cut from scraps of foam rubber or urethane foam. Mother will have to help out when it comes to sewing the mattress covers. She might even want to sew sheets and small blankets to make the ensemble more complete for the young mother.

Just one more suggestion: Better tell Santa the sizes of the beds so he brings the right dolls. △ △



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I'll show you how to make money out of even smallest diner or roadside stand—and I'll show you how to start on a "shoestring" the way I did. I'll show you how to attract the crowds and how to get the cash coming in within an hour after you open your doors for business. No matter where you live—small town or big city—there are money-making opportunities all around you, provided you get off on the right foot. The big thing to remember is this: Don't get into the restaurant business blindly and trust to luck to succeed. To make money, you've got to know what you're doing. And I am in a position to give you all the information you need to get off to a flying start. Give me a chance to prove it. Just send me your name for my Free Book "Making Money on Food". There is no charge for the book—now or at any other time—and no salesman will call. Send name on postcard to-day to Ken Kessler, SCHOOL OF RESTAURANT BUSINESS, 335 W. Madison Street, Dept. K-1011, Chicago 6, Ill.

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SMILING CLOWN

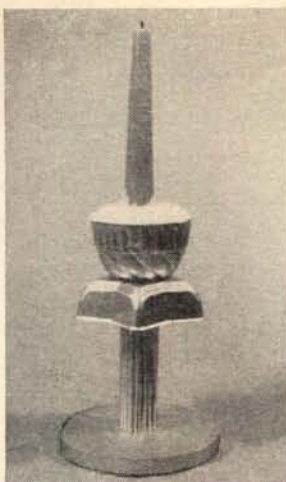
18" tall. Sew by hand or machine, and stuff. Gay plastic face and cut material supplied; silk, rayon and satin in different colors. No two dolls alike. Sells for \$1.98. Single sample \$1.00. 3 or more—price only \$.80 each.

DOLL FACES only

Our beautiful plastic smiling clown faces now \$2.00 per dozen—less in 3 dozen lots—size 2 1/2" x 3". Also available: sweetheart, cat, colored mammy, rabbit, monkey, panda bear and chicken faces at various prices. Folder with description and prices 10c. No C.O.D.'s. THRIFT MAILMART, Wantagh 18, N. Y.

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HOLIDAY CANDLE HOLDERS



HOLES ARE PUNCHED in a bowl-shape and a star-shape aluminum gelatin mold and a wood screw holds the two to a dowel 3/4 in. long. It can be plain or fluted. A wooden disk 5 in. in diameter is screwed to the bottom of the column for a base. Spray the assembly with gold or other desired

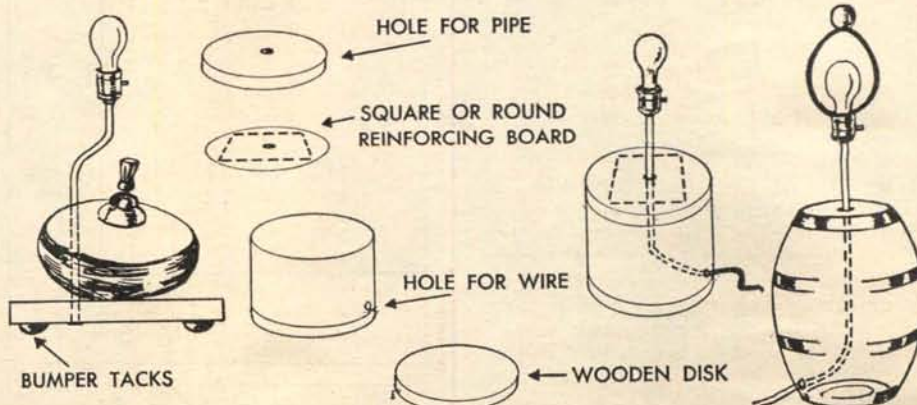
finish. Pour the top mold full of melted paraffin, then insert a candle and hold it erect until the paraffin sets firmly. Beat with a fork 1/2 cup melted, slightly cooled paraffin to a foam. Pour this over the hardened paraffin to simulate snow. Decorate the base with evergreens. △ △

Three Lamps



LAMP BASES CAN BE MADE from almost anything, and to prove it we show two lamps made from toys, one made from a small oak keg, of the type in which pickled figs or herring are sold. A length of electrician's pipe is required in each case, plus a couple of locknuts, a socket and a lamp harp. The latter can be eliminated if a clip-on shade is used.

A pound or two of dry sand or gravel inside the drum will make the lamp more stable. A large top, a wooden disk 6 to 8 in. in diameter and a length of pipe bent with an offset as shown, make the top lamp. Paint the disk one of the colors on the top. Invert the keg, as the top will be removed, and drill a hole in the bottom for the pipe. △ △

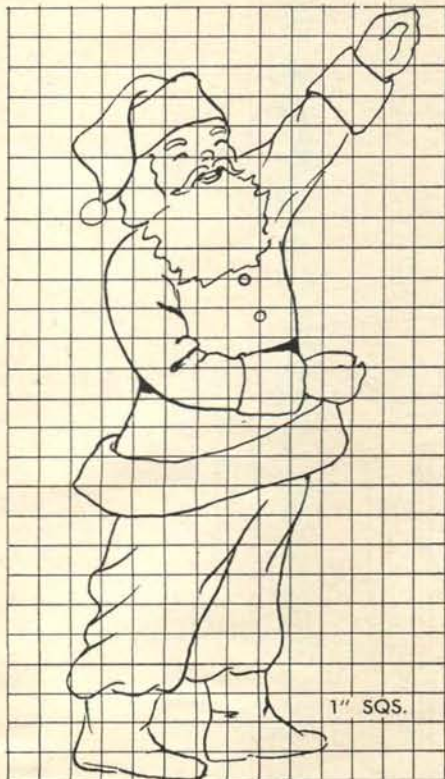


Angel Airport



AN UNUSUAL CENTERPIECE for the holidays is this "angel airport" made from a discarded bird cage. Wire cutters were used to cut away the two ends and bottom. If a flat-topped cage is used, it can be bent into an arch. Clouds on which the angels stand are pieces of plastic foam covered with cotton. Artificial holly, a couple of Christmas-tree ornaments or stars add color. The angels are small doll angels that can be purchased at most department, novelty and ten-cent stores.

Bell-Ringing Santa



DOOR ORNAMENT

MADE FROM HARDWARE CLOTH and bound with colored masking tape, this stylized door ornament also serves as a holiday mailbox to accept the overflow of cards that jam a regular-size mailbox. The triangular-shape back of the ornament, as well as the bottom and front of the mail compartment are cut from one piece. Separate, smaller pieces are cut to fit and wired to fill the end spaces. Pipe cleaners are glued on the ornament to spell out the word "mail" in color.



CUT FROM A SHEET of light plywood or 1/4-in. hardboard, using an enlargement of the squared pattern on this page, Santa is painted on both sides so he provides a decoration for both indoors and out. He is 26 in. tall and stands on a platform of plastic foam. A block of the same material supports his lifted foot. Bells are hung across the top of the window (they are purchased bells that can be of any desired size, shape or color) and lengths of red ribbon are led from the bells to Santa's upraised hand.

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Forsythia, Yellow 1 to 2 ft.	.10 ea.
Pink Spirea 1 to 2 ft.	.10 ea.
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Red Leaf Barberry 1 ft.	.35 ea.
Green Leaf Barberry 1 to 2 ft.	.15 ea.
Vitex Purple 1 to 2 ft.	.19 ea.
Russian Olive 1 to 2 ft.	.19 ea.
Pussy Willow 1 to 2 ft.	.19 ea.
Pink Azalea, Native Collected 1 to 2 ft.	.39 ea.
Sumac, Greenish flowers 1 to 2 ft.	.39 ea.
Spice Bush 1 to 2 ft.	.19 ea.
Spirea Thunbergii 1 to 2 ft.	.19 ea.
Brook Euonymus Native Collected 1 to 2 ft.	.19 ea.
Althea, Pink 1 to 2 ft.	.19 ea.

EVERGREENS

Glossy Abelia 1/2 to 1 ft.	.25 ea.
Short Leaf Pine, Native Collected 1 to 2 ft.	.19 ea.
American Holly 1/2 to 1 ft.	.29 ea.
Cherry Laurel 1/2 to 1 ft.	.29 ea.
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Dwarf Red Buckeye 1/2 to 1 ft.	.69 ea.
Magnolia Grandiflora 1 to 2 ft.	.69 ea.
Magnolia Grandiflora 3 to 4 ft.	1.49 ea.
Mimosa Pink 1 to 1 1/2 ft.	.10 ea.
Mimosa Pink 2 to 3 ft.	.19 ea.
Mimosa Pink 3 1/2 to 5 ft.	.25 ea.
American Red Bud 2 to 3 ft.	.25 ea.
Chinese Red Bud 1 to 2 ft.	.49 ea.
Golden Chain Tree 1 to 2 ft.	.98 ea.
White Dogwood 1 to 1 1/2 ft.	.12 ea.
White Dogwood 2 to 3 ft.	.19 ea.
White Dogwood 3 to 5 ft.	.39 ea.
Pink Flowering Dogwood 2 ft.	1.20 ea.
Pink Flowering Dogwood 3 1/2 to 5 ft.	2.35 ea.
Golden Rain Tree 1 to 2 ft.	.49 ea.
Purple Leaf Plum 2 to 3 ft.	.49 ea.
Red Flowering Peach 2 to 3 ft.	.45 ea.
Red Flowering Crab 2 to 3 ft.	.69 ea.
Tulip Poplar, Native Collected 1 to 1 1/2 ft.	.25 ea.
Tulip Poplar, Native Collected 2 to 3 ft.	.49 ea.
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White Flowering Peach 2 to 3 ft.	.49 ea.

SHADE TREES

Catalpa Fish Bait Tree 1 to 1 1/2 ft.	.12 ea.
Catalpa Fish Bait Tree 2 to 3 ft.	.19 ea.
Chinese Elm 2 to 3 ft.	.19 ea.
Weeping Willow 2 to 3 ft.	.25 ea.
Silver Maple 2 to 3 ft.	.15 ea.
Ginkgo Tree 1 to 1 1/2 ft.	.49 ea.
Ginkgo Tree 2 to 3 ft.	.98 ea.
Norway Maple 2 to 3 ft.	1.49 ea.
Pin Oak 2 to 3 ft.	.98 ea.
Kentucky Coffee Tree 1 to 2 ft.	.98 ea.
Lombardy Poplar 2 to 3 ft.	.12 ea.
Lombardy Poplar 3 1/2 to 5 ft.	.20 ea.
Sycamore 2 to 3 ft.	.19 ea.

FRUIT TREES

Elberta Peach 2 to 3 ft.	.39 ea.
Belle Ga. Peach 2 to 3 ft.	.39 ea.
J. H. Hale Peach 2 to 3 ft.	.39 ea.
Sun Haven Peach 2 to 3 ft.	.39 ea.
Yellow Delicious Apple 2 1/2 to 3 ft.	.49 ea.
Red Delicious Apple 2 1/2 to 3 ft.	.49 ea.
Stayman Winesap Apple 2 1/2 to 3 ft.	.49 ea.
Red Rome Beauty Apple 2 1/2 to 3 ft.	.49 ea.
Montmorency Cherry 2 1/2 to 3 ft.	.98 ea.
Black Tartarian Cherry 2 1/2 to 3 ft.	.98 ea.
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Burbank Plum 2 to 3 ft.	.49 ea.
Red June Plum 2 to 3 ft.	.49 ea.
Damson Plum 2 to 3 ft.	.49 ea.
Bruce Plum 2 to 3 ft.	.49 ea.
Apriocot Tree 2 to 3 ft.	.49 ea.

VINES

Trumpet Creeper	.15 ea.
Bitter Sweet	.15 ea.
Red Scarlet Honeysuckle	.25 ea.
Concord Grape Vine	.29 ea.
Wisteria Purple	.29 ea.

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Hardy Pecan Seedlings 1 to 2 ft.	.69 ea.
Butter Nut 1 to 2 ft.	.39 ea.
Black Walnut 1 to 2 ft.	.39 ea.
Chinese Chestnut 1 to 2 ft.	.89 ea.
Chinese Chestnut 3 to 4 ft.	1.98 ea.

HEDGE PLANTS

Evergreen South Privet 1 to 2 ft.	.02 ea.
California Privet 1 to 2 ft.	.06 ea.
North Privet 1 to 2 ft.	.07 ea.
Multiflora Rose 1 to 2 ft.	.10 ea.

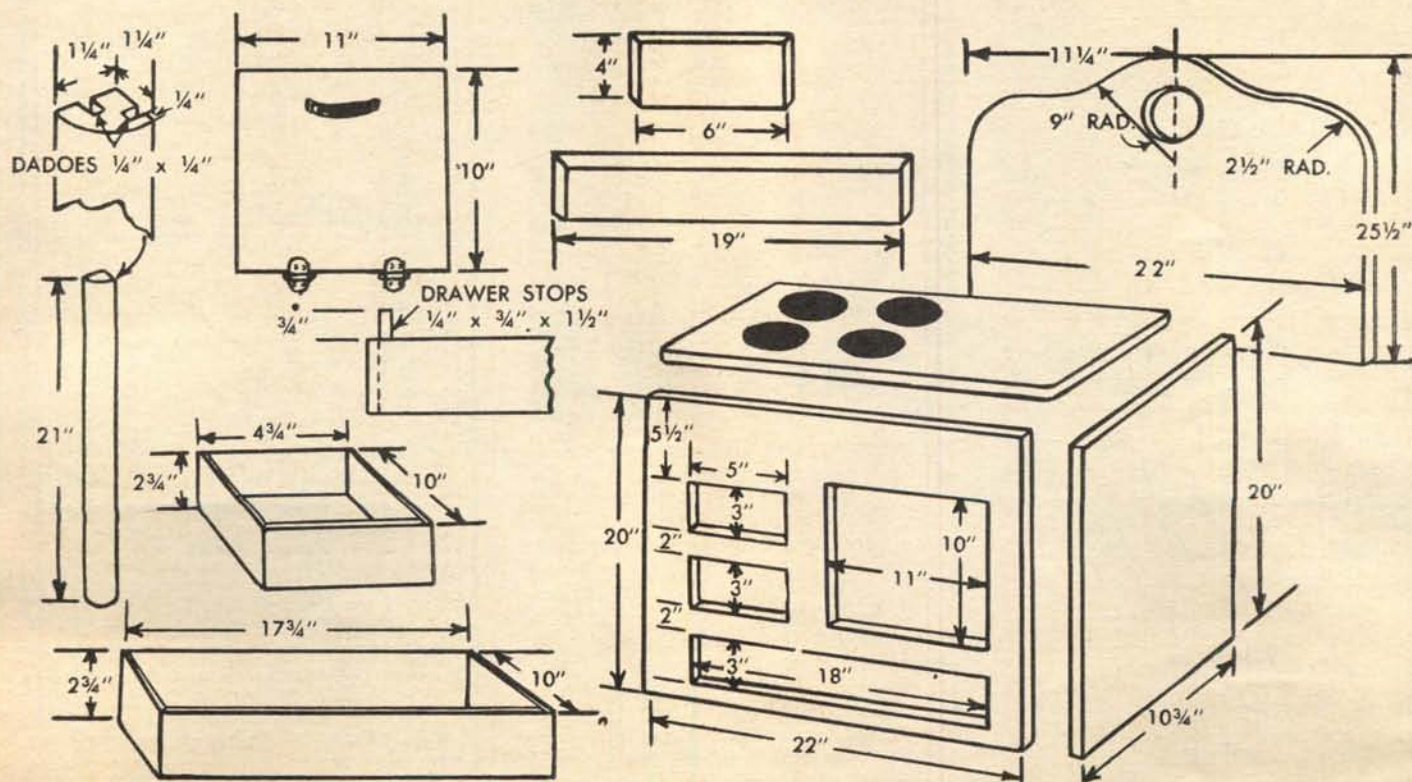
Satisfaction guaranteed on arrival or we will either replace or refund your money. You may order as many plants or as few as you wish. Orders under \$3.00 send 30 cents extra for postage and packing. Orders over \$3.00 Postpaid. NOTICE: FREE — Orders in the amount of \$3.00 you get 2 flowering shrubs free, our choice; orders \$5.00 or more you get 4 flowering shrubs free, our choice. Rush your order today.

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P.O. BOX 125-WW McMinnville, Tenn.

NECY HALES



FRONT, SIDES AND BACK of this scaled-down kitchen range are cut from $\frac{1}{4}$ -in. plywood. Lengths of $1\frac{1}{4}$ -in. quarter-round are dadoed to accept the plywood and form strong corners. Not shown in the drawing, but suggested for added strength and better appearance, are lengths of plywood nailed to the upper and lower edges of the sides and front. At the bottom the strips are 1 in. wide, at the top $\frac{1}{2}$ in. wide. After assembling front, sides and back, measure for the top and make it large enough to project $\frac{1}{8}$ in. on each side and at the front. The top is cut from $\frac{1}{2}$ or $\frac{3}{4}$ -in. plywood. The hole in the stove back should be of a size to accommodate an old alarm clock. If no clock is available, simply paint the clock on the wood. While the dimensions of the oven door are shown to be the same as the oven opening, it should be trimmed about $\frac{1}{8}$ in. for an easy fit. Note that the drawer fronts are 1 in. larger each way than the drawer openings to provide a $\frac{1}{2}$ -in. flange all around. The drawer fronts can be left plain, or a 75-deg. bevel may be cut on the face along each edge for a more finished appearance. Burners on the range may be painted on, or lids from coffee cans may be painted black and nailed in place. Handles for the burners are drawer pulls cut in half. For added realism a grill from a discarded refrigerator can be installed as an oven shelf. Paint the range in white, or decorator colors. Δ Δ



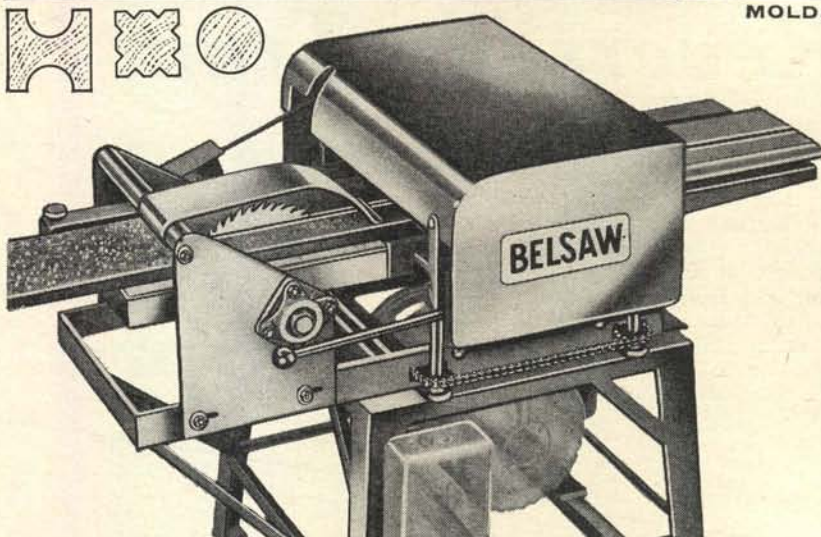
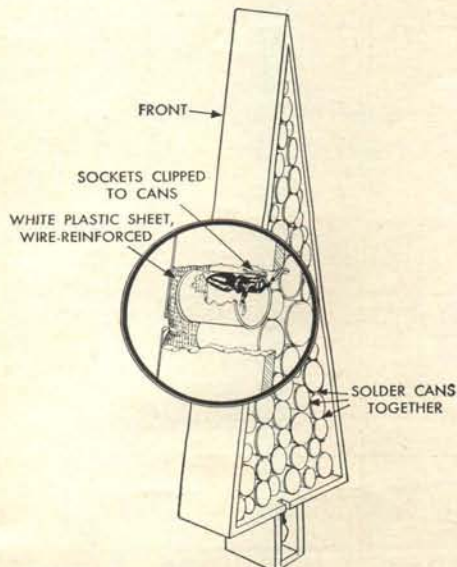


Bright and colorful as it shines in the night, this Christmas tree requires only a few pieces of lumber, some food tins and translucent plastic.

Tin-Can Christmas Tree

Photo and information courtesy General Elec. Co.

UNIQUE IN APPEARANCE, but easy to make, this "Christmas tree" has a frame of 1 x 4s or 1 x 6s. Size is determined by the number of food tins (both ends removed) that you can collect. If the wood frame does not hold the tins firmly, use a spot of solder between them. Translucent white plastic with wire reinforcement, sold at many hardware stores and mail-order houses, is used to cover the front of the frame. Transparent, colored D15 lamps create a brightly colored pattern of circles on the plastic, while a few D27 transparent, coated outdoor twinkle lights give the tree animation. Paint the outside of the tree frame green or any other dark color. Fasten the tree to a fence or the house. If it must be free-standing, nail a couple of pointed stakes to the "trunk" of the tree to anchor it in the ground. △ △



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MASTERCRAFT PLANS, Dept. 11XB, 7041 Olcott Ave., Chicago 31, Ill.

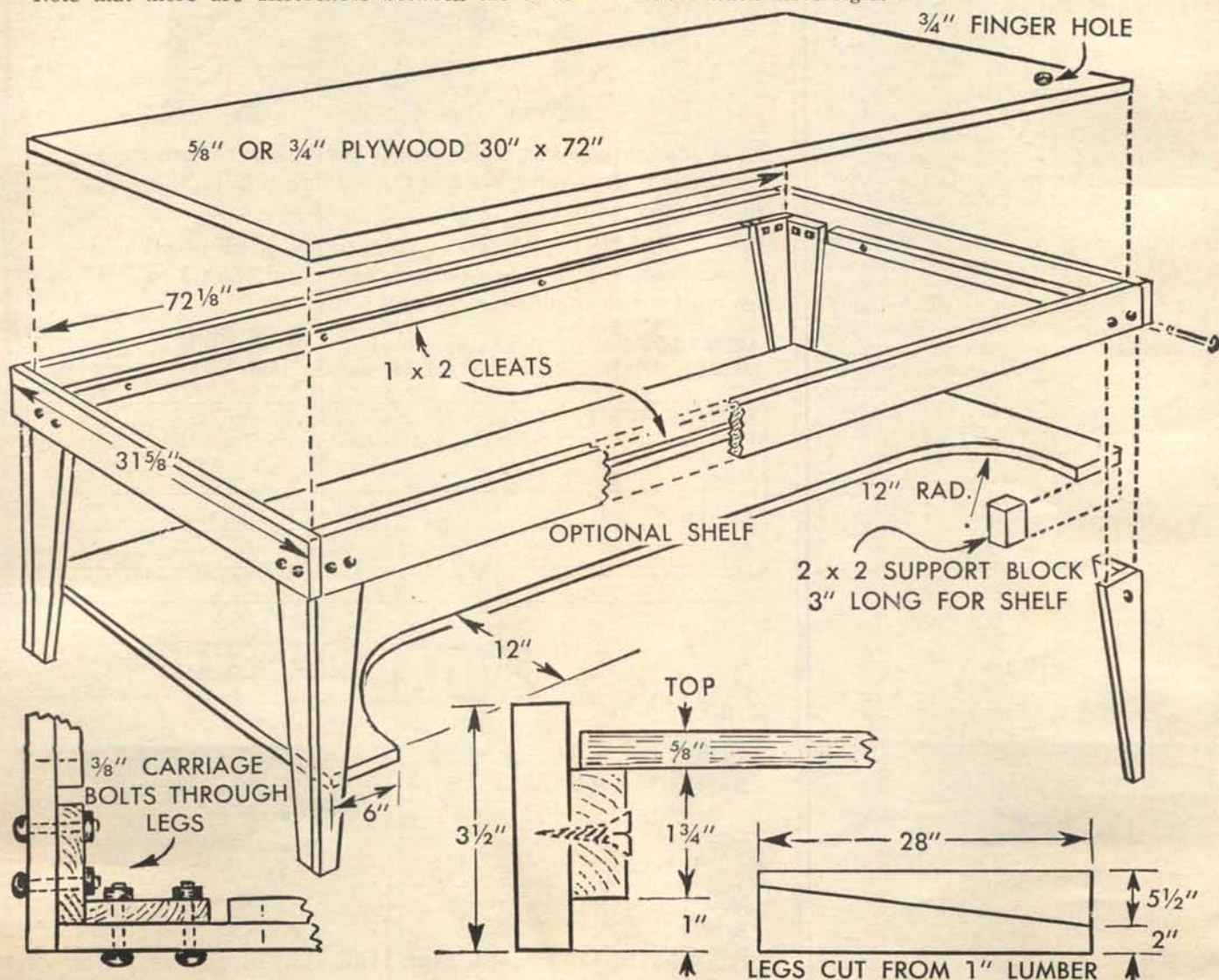


Reversible Train-Hobby Table

ONE SURFACE OF THE TOP of this extremely useful table can have a complete train layout, including buildings, bridges, etc., attached permanently. Removal of the rolling stock permits the top to be inverted, so that the opposite surface then can be used as a hobby or worktable. The original model of the table was built by Dr. Kenneth Weisbrod, head of the psychology department of the Riverside County Schools in California, for his two sons. Many Christmas gifts to youngsters will be trains and/or hobby kits, and this table is the ideal answer as to what to do about each.

Note that there are differences between the table

in the photographs and the one shown in the drawing. Two tables were built, one of the original size, another smaller, by an editor. Improvements were made on the original model to increase the strength and rigidity, and these are shown in the drawing. First, two bolts are used in each side of each leg, as indicated, rather than one. The leg members are glued as well as bolted. Secondly, if the table is to receive heavy usage by active youngsters, an optional shelf is suggested. The shelf is the same size as the top, but has a cutout on the front edge to provide leg room. This shelf makes the table much more rigid. $\Delta \Delta$



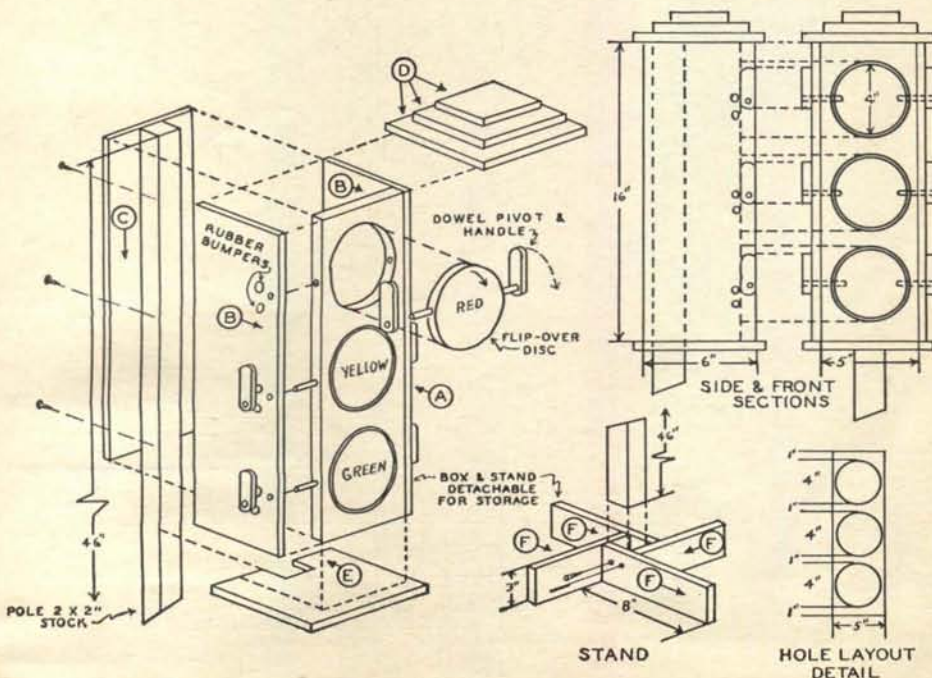
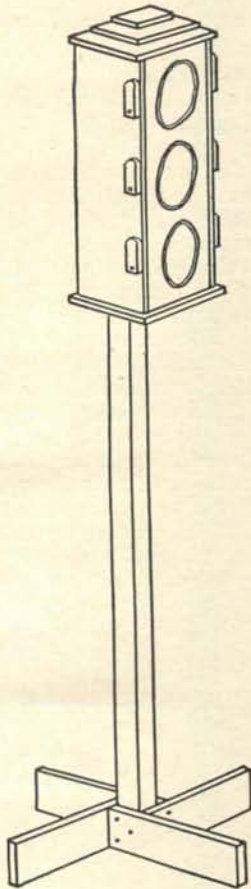
TOY TRAFFIC LIGHT

M. H. SLUTZ

EDUCATIONAL, AS WELL AS ENTERTAINING, this toy traffic light will teach youngsters to understand traffic signals. The light box and floor stand are detachable from the 2 x 2 column, to simplify storage. The face of the light is 3/4-in. plywood, the rest 3/8-in. plywood. Paint the inside of the light black, including the portion of the column that extends inside. The handles that pivot the light disks are positioned with bumpers so that when they are up the lights are "on," when down the lights are "off." The back surfaces of the disks are painted black. Make the disks about 1/8 in. smaller in diameter than the holes, to assure free operation. Fit the disks in the holes, align them carefully and drill holes through the light front and into the disks. Drop glue in the blind holes in the disks, position them, then slip lengths of 3/8-in. dowel through the light front and into the disks. Depending on the youngsters' ages, the light column may have to be shortened or perhaps made longer.

A, Box Front, 5" x 16", 1 Required.
B, Box Sides, 6" x 16", 2 Required.
C, Box Back, 5" x 16", 1 Required.
D, Box Top (stacked) 7" x 7".
1 of each Required 5" x 5".
3" x 3".

E, Box Bottom, 7" x 7", 1 Required.
F, Stand, 3" x 8", 4 Required. △ △



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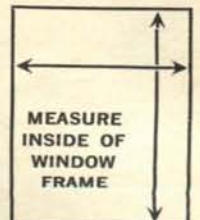
DeVac replacement windows can be installed by a do-it-yourself man in less than one hour per window. Each unit has its own aluminum frame to set inside the existing window frame. They can be installed from the inside of the room — a convenient wintertime remodeling job.

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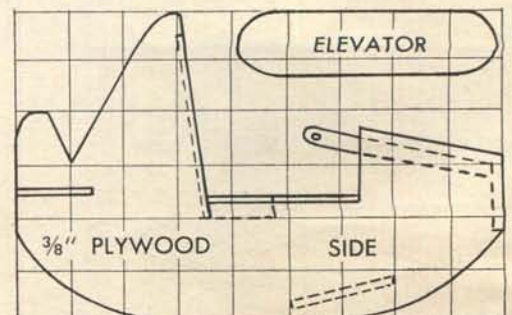
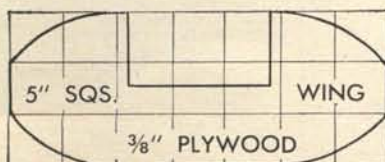
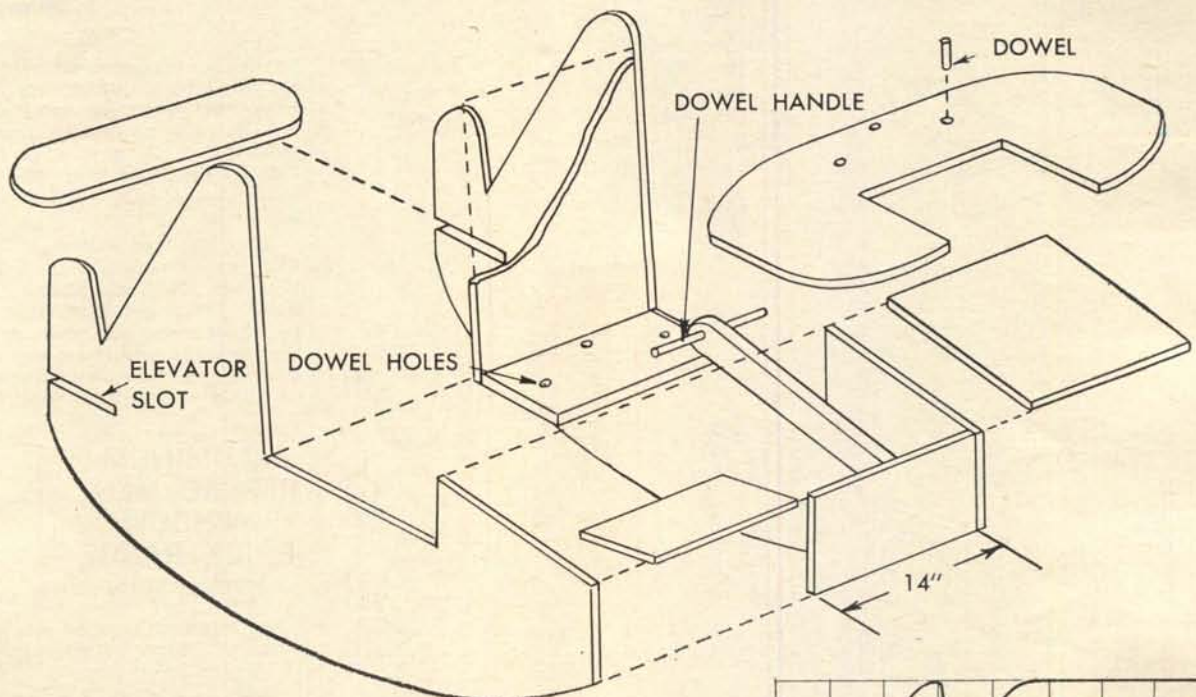
Please have dealer call on me ☐

Rocking Rocket Plane

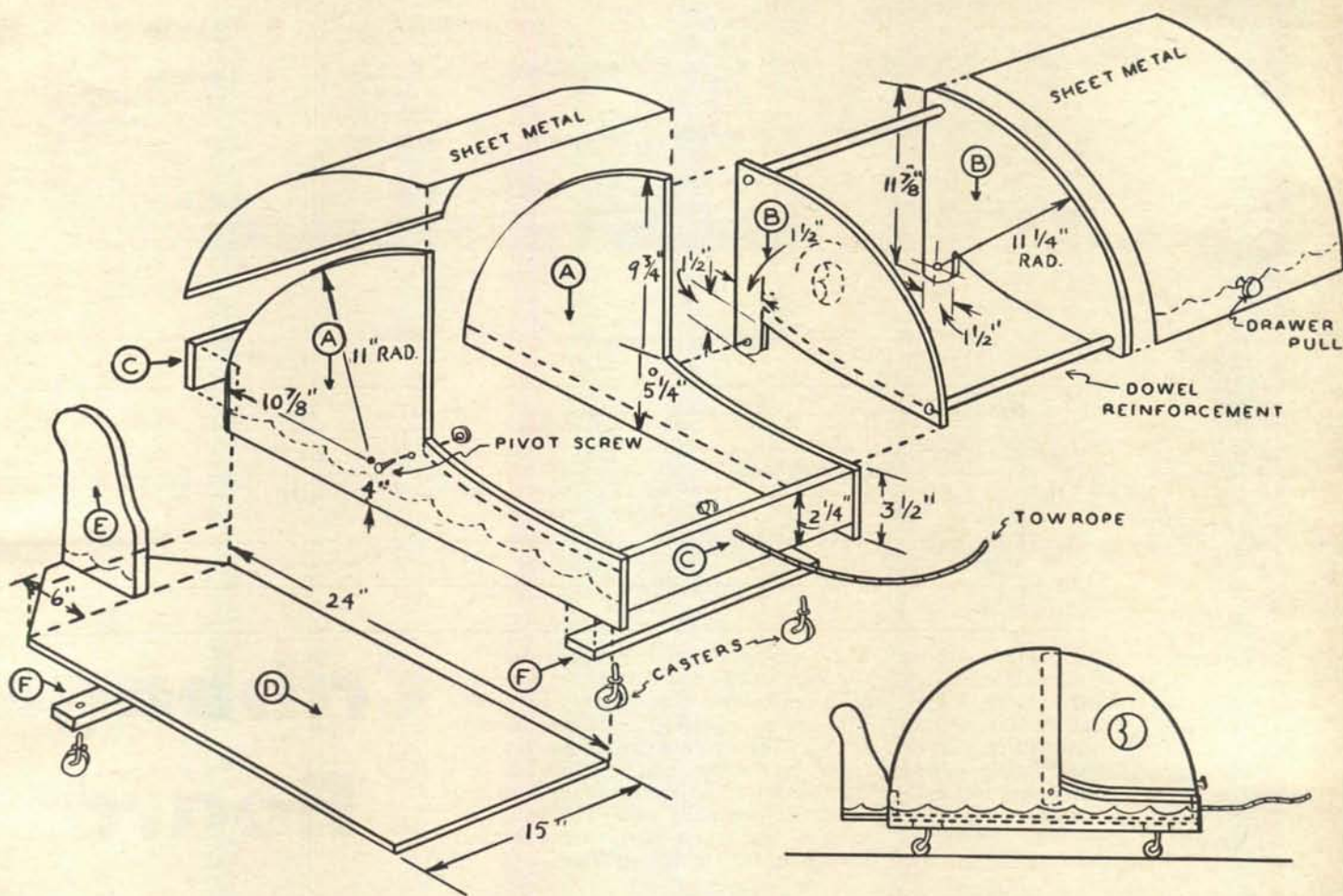
M. H. SLUTZ



DESIGNED FOR THE TODDLER WHO is growing up in the space age, this winged rocking-chair toy requires only a little imagination to become a Mach 3 jet plane. Removing the wing converts it to a true space-bound rocket. The plane is easier to store when the wing is taken off, which might be of more interest to Mother and Dad than the increased "imagination speed." Over-all dimensions of the plane can be changed to fit a particular child, but the sizes produced from enlarging the squared pattern will accommodate most youngsters. Moving the seat-back to the rear, or lowering the seat will vary dimensions also. The wing is placed across the plane over the seat, and $\frac{1}{2}$ -in. holes are drilled through the seat and wing. The wing then is removed and $1\frac{1}{2}$ -in. lengths of $\frac{1}{2}$ -in. dowel are cemented in the wing holes. The wing thus will be held in position by the dowels and the child's weight will hold it down in place. The seat, seat-back, footboard and front of the plane are cut 14 in. wide, to fit between the cut-out sides. The top of the plane's nose is made $\frac{3}{4}$ in. wider, so it will fit over the top edges of the plane sides. All parts of the plane are cut from $\frac{3}{8}$ -in. plywood, except the seat bottom, and "control arm," which are $\frac{3}{4}$ -in. plywood, or 1-in. solid stock. Sand all surfaces smooth and round edges and corners. Paint the plane brilliant colors. $\triangle \triangle$



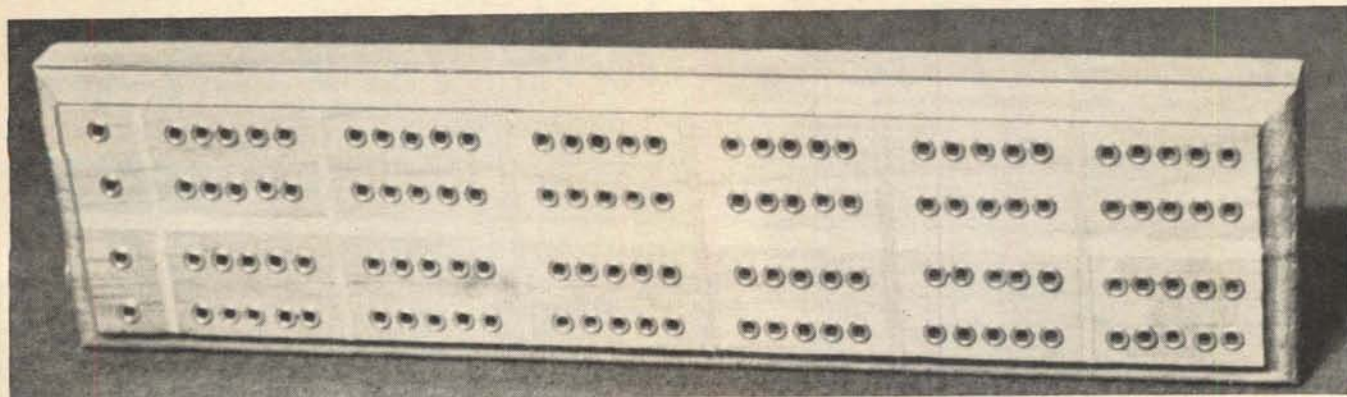
Happy-The-Whale Toy Chest



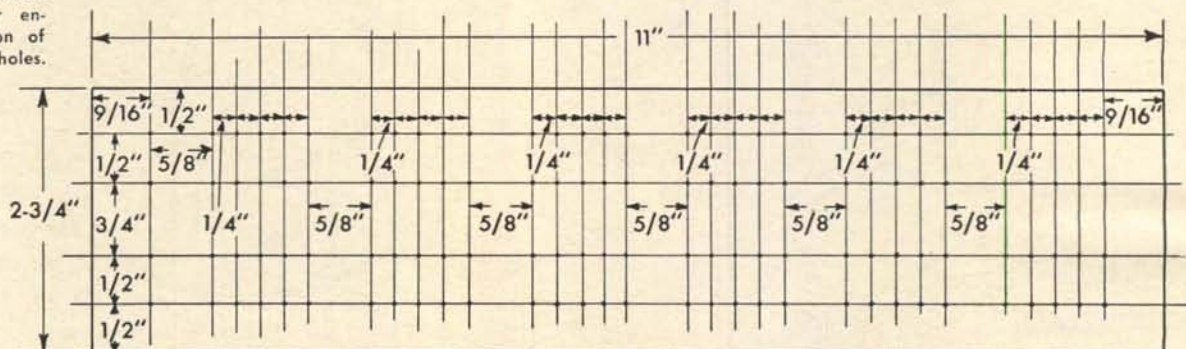
UNIQUE IN DESIGN, this toy storage chest is itself a toy that can be towed around on casters. Dimensions given show the chest to be 24 in. long, with a 6-in extension on the bottom cut at 45 deg., to support the tail. The tail is screwed to both the floor and to the shell of the curved body. Dimensions of the chest can be changed to suit, even reduced to produce a small pull toy for a toddler. Also, while dimensions given are quite accurate, it is suggested that you first lay out the side members on heavy cardboard to check the pivoting action. If the pivot is off just slightly, the "mouth-door" will not operate.

Either $\frac{3}{8}$ or $\frac{1}{2}$ -in. plywood is used for the four side members and the bottom. The curved pieces can be light sheet metal, such as do-it-yourself aluminum, with doubled edges to eliminate sharp edges, or $\frac{1}{8}$ -in. hardboard. It might be necessary to steam or soak the latter material. The pivoting mouth is made so that it fits between the sides of the whale, but the front edge fits on top of, and flush with, the front member of the body. Note that the 1 x 4 caster supports are long enough to fit under

the lower edges of the sides of the whale. These supports also strengthen the floor, as it is quite likely that youngsters will explore Happy's insides. Paint the inside a bright red, the outside another gay color. Use blue for the waves and the eyes. Δ Δ



Inlaid strips give this cribbage board a custom-made look that is further enhanced by the insertion of metal eyelets in the holes.



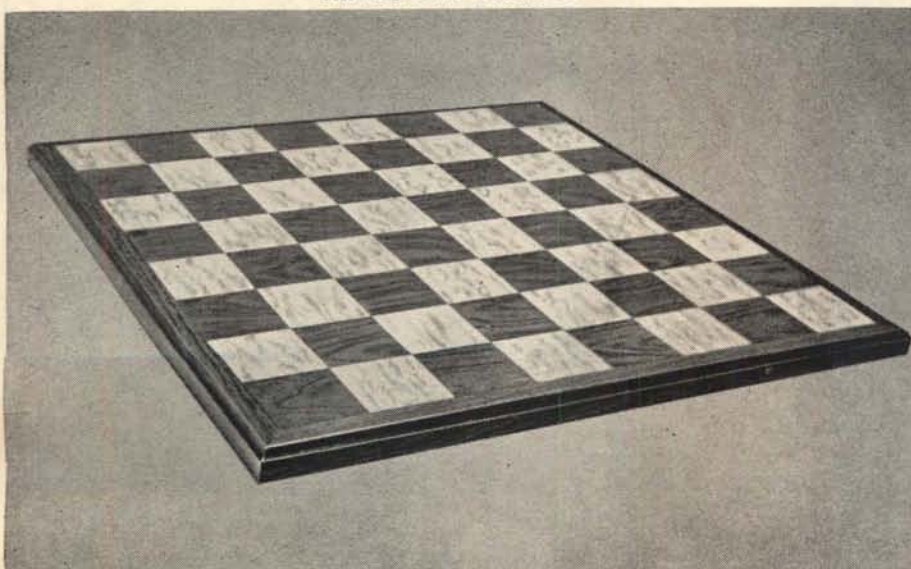
ANYONE INTERESTED IN CRIBBAGE will be delighted with this accurate counting board. The edges of the 1-in. block used for the board can be left square, or shaped with a router bit or shaper as is the one shown. For an added touch, cut a saw slot down the center lengthwise, and one between each of the groups of peg holes and insert strips of wood of contrasting colors.

The holes can be simply drilled in the hardwood to accept short lengths of aluminum wire, or they can be fitted with eyelets, as is the board shown. The eyelets can be purchased from mail-order houses. Smaller diameter wire, or brass brads can be used for counting pins to fit in the eyelets. Seal and varnish the board before inserting the eyelets. $\triangle \triangle$

Cribbage Board

CHESS BOARD

M. ROBERT BEASLEY



Although seemingly a simple project, this chess board requires meticulous craftsmanship to produce a truly beautiful piece of work. Each square must be exactly the same size as all the others; each must be true and square, fitted precisely.

START CONSTRUCTION of this chess board with an 18 x 18-in. square of $\frac{3}{4}$ -in. plywood. It must be cut accurately square. Squares for the board are cut from $\frac{1}{4}$ -in. maple and walnut, or any two contrasting woods. Each of the blocks measures exactly $2\frac{1}{4}$ in. each way, and is cut with perfectly square corners. Cement each block to the base, starting in the lower, righthand corner. Do the bottom and righthand rows first. Apply adhesive to the bottom and edges of each square. For the frame of the assembled board cut 20-in. lengths of 1 x 1-in. walnut and miter them at 45 deg. In addition to glue, the frame is secured by three $\frac{1}{4}$ -in. dowels $2\frac{1}{2}$ in. long in each strip. The dowels fit in blind holes in the frame strips, and corresponding holes drilled in the edges of the base of the board. Clamp the frame strips in place, then set the board aside until all glue has set completely. If necessary, apply weight to the face of the board to keep the squares in place. Sand the surface of the board absolutely smooth, apply sealer and a coat of spar varnish. For a finishing touch, cement a piece of felt to the entire bottom. $\triangle \triangle$

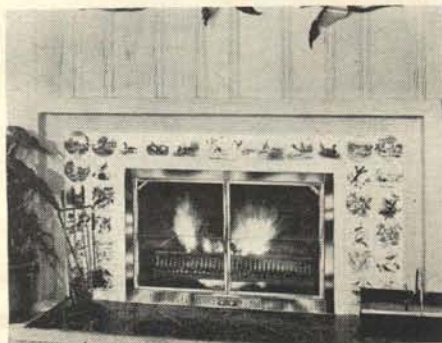
Evergreen Christmas Tree



FIRE HAZARD IS ELIMINATED in this tree made of flame-resistant fiber that retains that resistance for the life of the tree. Other advantages of the tree are that it is easy to clean, is colorfast and odorless, mildew-proof and crush-resistant. Available in green or frosty white, highlighted with strands of silver set into the branches. Tree is made of Rovana fibers, a product of the Dow Chemical Co. Trees come in 18, 24 and 36-in. sizes, at \$2.49, \$2.98 and \$5.49 from B & S Novelty Co., 59 St. Marks Place, Brooklyn 17, N. Y.

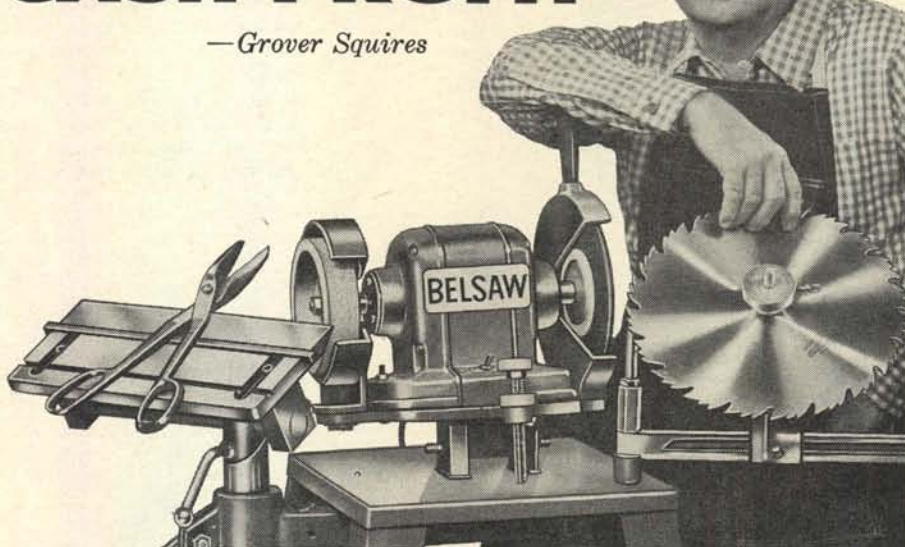
Glass Doors for your Fireplace

HEAT-TEMPERED glass doors of this fireplace enclosure stop all flying sparks, keep smoke, soot and ashes inside. Two sliding draft doors at the bottom of the frame can be adjusted to make the fire burn slowly or fast. The glass doors open wide on piano-type hinges, making it easy to refuel the fireplace. The glass radiates the heat gently, eliminating the drafts along the floor that an open fireplace causes. Framed in solid brass, the glass-door unit is available in 32 standard sizes to fit any type fireplace, including the Swedish corner. Other sizes can be made to order. For further information write to The Thermo-Rite Mfg. Co., Akron 5, Ohio.



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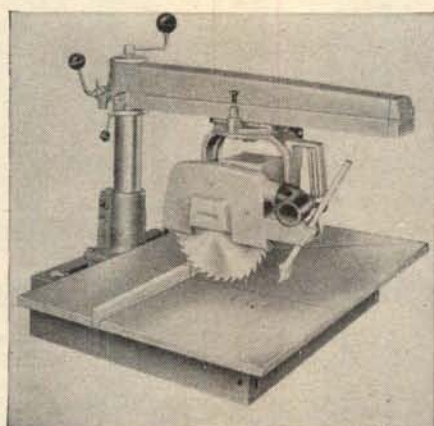
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WORKBENCH

AT CHRISTMAS TIME you home craftsmen come up out of your basement workshops to do your gift shopping for the wife and family, while they slip down to your shop to see what you need in the way of tools to complete your collection. You probably know what tools you want, and have mentioned them to the family, so, while some tools are shown in this selection of gifts, most of the items are suggestions for the wife and family. Many of the selections are unusual or exotic, the sort of off-beat gift that is most appreciated because it is unique and not at all what was expected.



ECONOMY RADIAL-ARM SAW

LOW-COST VERSION of the famous DeWalt "Power Shop" radial-arm saw, this unit sells for under \$200. Saw has 9-in. blade, 2½-in. depth-of-cut, motor that produces 1.8 H.P. Additional information may be obtained at any franchised DeWalt dealer or DeWalt, Inc., Lancaster, Pa.



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UNUSUAL FOLDING TRAY

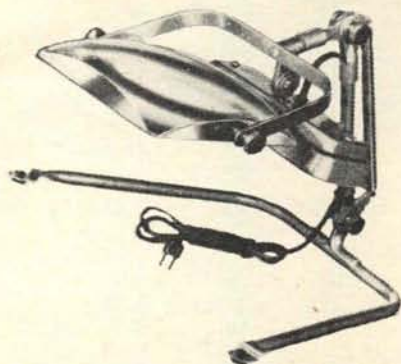
IMPORTED FROM INDIA, tray is hand-carved walnut, bound in brass. Ideal for holiday serving, tray is ornament 10 in. high closed, opens to 15¼ in. wide. \$9.95 ppd., shipped direct to you, pay postman small duty charge. Giamporcaro Co., P. O. Box 1903, Blasdel 19, New York.



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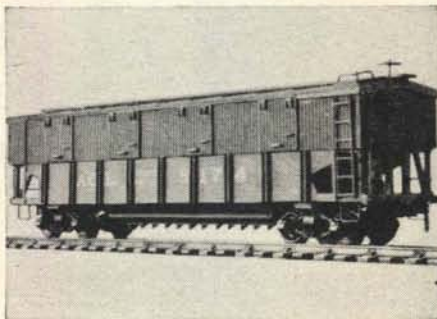
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"KNOCKED-DOWN" WORKBENCH

SHIPPED READY TO ASSEMBLE, this bench has hardboard-on-lumber top, 20x20-in. drawer, tool-storage shelf, perforated-hardboard back. Vise and drawer lock not included. About \$32, other benches at various prices. From Bond Products Co., 100 Labadie St., Detroit 29, Mich.



COLLECTOR'S CAR KIT

MODEL RAILROADERS will want this model of the unique ACL hopper-bottom phosphate car, circa 1922. Prototype loaded from side, dumped vertically between the rails. Complete with decals, sprung trucks, Universal coupler pockets. Ambroid Co., East Weymouth, Mass.



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EXCITING EDUCATIONAL TOY

SIMPLY CARDBOARD squares and triangles with flanges that can be held together with rubber bands, this toy is fascinating enough to keep children from 5 to 90 busy for hours, making shapes of all kinds. Kits at \$2, \$5 and \$10 ppd. Education Exchange, 2203 Miller St., Seattle 2, Wash.





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DONKEY FROM "FANTASIA"

DESIGNED FOR TOTS up to 5 years old, this delightful Disney-inspired, spring-suspended donkey stands 44 in. tall, has ears that move back and forth. Heavy springs are chrome-plated, frame has gold-colored finish. \$29.95 retail, manufactured by Bayshore Industries, Elkton, Md.



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SANDER, JIG SAW, DRILL and accessories in fitted container have blue-silicone bonded finish, 4-in. lead cords that fit 10-ft. extension cord. Variations of matched set also available. Called 3-Tool SpeedPaks, sets are made by Speedway Div., Thor Power Tool Co., La Grange Park, Ill.



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TO CLEAN FISH, just plug the cord into the socket of the cigarette lighter and go to work. Available in 6 and 12-volt models. At home, use flexible shaft with any 1/4-in. drill motor. Retail price is \$19.95 where Dremel products are sold, or direct from Dremel Mfg. Co., Racine, Wis.



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IDEAL FOR CHRISTMAS GIFTS, these book ends are from Mexico. Monk book ends available in 3 different positions; 12-in. standing monk, 10-in. kneeling or sitting monks. Donkeys are 9 in. high. Cost is \$4.95 per pair ppd., R. G. Shank and Sons, Dept. WH, P. O. Box 1, Rheems, Pa.



900-POWER MICROSCOPE

SUITABLE FOR beginning hobbyist or advanced student, microscope has magnification from 50X to 900X in 8 ranges. Mechanical stage permits moving slides while looking through eyepiece. Microscope and accessories in wooden case \$25.88. F-610, Lafayette Radio, 165-08 Liberty Ave., Jamaica 33, N. Y.



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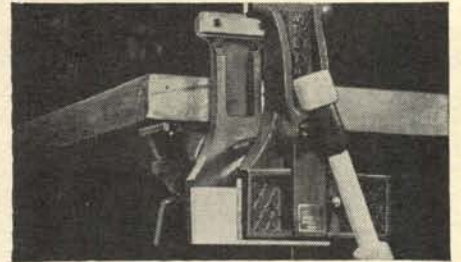
"ELECTRIC-EYE" CAMERA

COUPLED EXPOSURE METER on this camera has "no-squint" viewfinder with pointer that shows setting to automatically adjust shutter speed and lens opening. Shutter speed to 1/500, f2.8 lens, shutter release on front. Vito CL retails for \$69.50 at all stores selling Voigtlander products.



POLYNESIAN TIKI FOUNTAIN

FIBER-GLASS REPLICA of South Seas Idol stands in bowl with water cascading over body. Treated with fluorescent paints, idol and base will glow under "black light." Idol only, \$47.95; Idol Fountain, \$125.95 from Kingbird Products, 1184 E. Edna Place, Covina, Calif. Ask about other items.



WOODWORKING-METAL VISE

COMBINATION VISE has 3 x 7 in. wood-working jaws that come flush with bench top. Half-turn of locking knob permits bringing up 1 x 4-in. metal jaws. Can handle pipe from 1/4 to 4 1/2 in. For further information on Universal Turret Vise write Wilton Tool Co., Schiller Park, Ill.



COPPER CHRISTMAS ANGELS

ANGEL KIT contains two sheets of gleaming copper for one large angel, 7 in. tall, and four smaller angels, 4 in. tall, copper curls, tape and sheet of instructions. Ordinary scissors used to cut copper. \$2.75 ppd., Klemm Kraft P.O.B. 60, Planetarium Station, New York 24, N. Y.



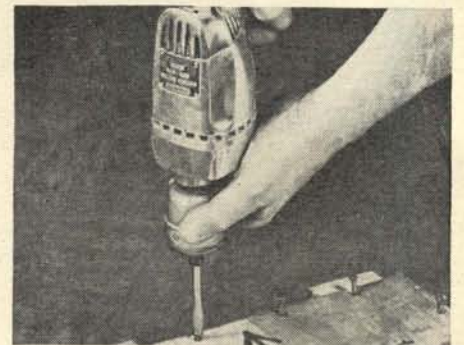
MOVIE VIEWER-EDITOR

UP TO 400 FT. OF FILM can be viewed and edited on this unit that has 110-volt light source, self-contained film notcher and a Quik-Splice film splicer (Pg. 64, July-Aug.) built into the base. \$14.95 at photo stores or direct from Hudson Photo Industries, Irvington-on-Hudson, New York.



ELECTRIC SCISSORS FOR MOM

NEW THIS CHRISTMAS SEASON, these electric scissors are designed to cut all fabrics, weigh only 6 oz. Available in four pastel colors. Retail at \$7.95 at department, drug, appliance or hardware stores, or direct from Speedway Div. of Thor, 1421 Barnsdale Rd., La Grange Park, Ill.



SCREW DRIVER ATTACHMENT

UNIT HAS friction clutch for control of power. Converts any 1/4-in. electric drill to a portable power screw driver. "Yankee"-type snap-in bit holder permits quick change of bits. For more information, write: Dept. PD, Stanley Tools, 111 Elm St., New Britain, Conn.



HANDY SLIDE RULE

HAS THIS INSTRUMENT always intrigued you? Here's a chance to own one at low cost, complete with 28-page book that is a "home-study" course on its many uses. With it you can multiply, divide, find cube roots, square numbers, find proportions. \$1.00 postpaid from Larch, 118 E. 28th St., New York 16, N. Y.



HAND-TURNED CANDLESTICKS

IN SOLID WALNUT OR CHERRY, candlesticks can be used in arrangements or pairs. Ideal as gifts. Range in price from \$5 for 6 1/2-in. height to \$13 for 15 1/2-in. height, in 7 sizes. Catalog with these and other lovely items available free, about Dec. 15. America House, 32 E. 52nd St., New York 22, N. Y.



HOT-ROD MODEL

MODEL ENTHUSIASTS will be delighted with the "Black Widow," a copy of the popular hot rod built up from a Ford Model "T" pickup truck. Almost half of the fifty plastic parts in the kit are chrome-plated. Motorized model (PC260M) \$2.49, show model (PC60) \$1.49, wherever Monogram Models are sold.



Fire Safety for The Home

Photos courtesy Institute For Safer Living, American Mutual Liability Insurance Co.

EDWARD BENTLEY

ABOUT 1,500 AMERICAN HOMES burn each day, with 30 or more persons losing their lives in the fires. A few simple precautions will reduce the chances of your own home burning, and some basic instructions will give you and members of your family an excellent chance of survival in the event that your home does catch fire.

More fires start in the kitchen than any other room. They are caused by exposed heating elements and flames necessary for cooking, plus ordinary carelessness. Cooking ranges should be kept free of grease; a few minutes of cleaning each day is good insurance against fire. Remove excess water from foods before frying, as the water will cause "popping" that will splatter hot grease and can cause a fire. If grease catches fire, **don't panic**. Throw a handful of salt or baking soda (never water or flour) on the fire. Cover a pan with a lid if it is on top of the range, shut the oven door tightly if the pan is inside. Turn off the gas or electricity, but do not try to move the burning pan. The closed oven door or pan lid, plus the salt or baking soda, will extinguish the blaze. Loose clothing and long sleeves should never be worn while working at a range. Window curtains should be at least 3 ft. away from range burners.

The bedroom is second on the list of fire-dangerous locations, with smoking in bed accounting for 13 percent of all deaths from fires. Also, electric and gas heaters placed too near furniture, bed clothing or drapes, can turn a room into a blazing inferno in moments. Bedroom doors should be closed tightly when

1. If a fire is confined to one section of the house, and stairways are not on fire, lead the children out of the house to prevent panic. And, most important, do not panic yourself.

you go to bed, windows should be open for fresh air. The door will help hold back advancing fire, the open windows will provide oxygen, preventing suffocation. Most fire deaths are due to breathing super-heated, gas-laden fumes, not from flames.

Fireplaces are lovely, but do not use gasoline or kerosene to start



2. Notify the fire department by telephone the moment you notice smoke or flames. Keep the telephone number of the fire department taped to the phone for instant use.



3. If smoke or flames prevent you from reaching your telephone, run to the nearest fire-alarm box, pull the alarm and wait for the fire engines to direct them to your home. Do you know the location of the nearest alarm?

fires in them. A protective screen should always be used to stop flying sparks; and even then all combustible objects should be at least 3 ft. away from the fire. This includes the mantel above. Completely extinguish the fire before going to bed or leaving the house. Quite positively, a Christmas tree should not be placed nearer than the length of a room to a fireplace. To help keep the tree green, do not use the fireplace during the time the tree is up. Better still, use a metal tree. Under any circumstances, check the wiring of the tree lights. If there is the slightest sign of wear in the wires that could cause a short circuit and set the tree on fire—repair the wires, or discard that string of lights.

Make sure there are plenty of ash trays of large size. A cigarette left carelessly burning can drop into upholstery and cause it to smolder for hours before it bursts into flame.

Clean and check your furnace annually, repairing defects at once. Adjustment and repair of gas and oil units should be left to a service specialist. Defective chimneys, clogged flues, pipes and dampers cause 40,000 fires each winter. Carbon deposits that form on flue linings are flammable, and unless removed regularly are a serious fire threat. Provide metal containers for ashes, so hot embers will be harmless. When banking coal fires, leave some red coals on top, to burn gases that might otherwise collect and later explode. If you smell oil or gas fumes from the basement, shut off the fur-

nace. This usually can be done at the thermostat. Close the basement door tightly and open all windows in the house. If you can't find the leak immediately, call the fire department. Get everyone out of the house until the leak has been repaired.

Your workshop should have a separate electrical circuit to handle power tools. Light household wiring is not designed for such heavy use and will heat up, causing a fire hazard. When working with wood that has been varnished, lacquered or shellacked, or where you have used thinner or remover, remember that dust and shavings from the wood often are highly flammable. Dust caused by using an electric sander on impregnated woods becomes explosive when suspended in air, so do not smoke, and be careful of hot-water tanks and heating plants that might ignite the dust.

FAMILY ESCAPE PLAN

"Don't Panic," are the key words for any plan you devise for helping your family escape from a fire. If you have upstairs bedrooms, insist that the doors be closed when you go to bed. Three-fourths of home-fire deaths occur **upstairs** from **downstairs** fires. Heated air as hot as 1,000 deg. quickly fills upper levels. People aroused by the smell of smoke who dash excitedly out into hallways often are felled instantly by superheated air. If you awake and smell smoke, first put your hand on the top panel of the door, Fig. 4. If the door is hot to the touch, you will commit suicide if you open it. A hot

door means the hallway outside is charged with lethal heat. Pound on the adjoining walls to awaken the rest of the family, then escape through a window, notifying the fire department by telephone or alarm box. In reporting a fire by telephone, Fig. 2, give the address clearly and slowly. If using an alarm box, remain at the box, Fig. 3, to direct the engines. Bedrooms opening on porch roofs offer ideal escape paths. Those that do not should be equipped with an anchored rope ladder. Even a single rope, or blankets or sheets knotted together, can be tied to a radiator or heavy piece of furniture, Fig. 5. If a door is not hot, brace your foot and shoulder against it and open it a few inches. Keep your head away from the opening, as a deep lungful of heated gas can cause unconsciousness. If there is pressure against the door, or a hot blast rushes through the small opening, **SLAM THAT DOOR SHUT!**

If hallways are accessible, awaken other members of the family and lead them to safety, Fig. 1. Call the fire department. In escaping through stairs and hallways, stay close to the wall while going down steps. Crawl along floors if smoke is dense. There is more oxygen and less smoke at floor level. Take short, shallow breaths while passing through heated or smoke-filled rooms. **Do not gulp air or hold your breath!**

Most fire deaths are caused by oxygen being burned from the air, leaving none to breathe. Instruct

4. If you smell smoke, place your hand against the upper part of the door. If it is hot, do not open, but escape out a window after arousing the rest of the family, if not hot, use caution.



5. If hallways are filled with fire, heat or smoke, escape from a window by tying bed clothing to a radiator or heavy piece of furniture and lowering yourself to safety.

your family to break windows if they should find themselves in a smoke-filled room. This will provide adequate oxygen while they escape. Also, impress on them that once they are out of a burning building to stay out! Valuables can be replaced, lives cannot. Close doors as you pass from the blaze to safety. By blocking off rooms you hold back heat and flames, increasing your chances of reaching safety. When possible, plan two escape paths from every room. Regular family fire drills will implant these safety paths into the minds of even children.

Attach the phone number of the fire department to your telephone and extensions. Tell the family the location of the closest fire-alarm box and the proper procedure for turning in an alarm. If you live in a one-floor house, escape can be simply a matter of opening or breaking a window and stepping out to the ground. If the screens are on the inside, show the family how they can be removed. A piece of furniture also can be used to break through the screen and glass. Keep in mind that



youngsters are taught constantly not to damage property, and that instructions on smashing screens and windows for escape in the event of fire must be firmly impressed on their minds. A few moments of in-

decision could mean the difference between life and death.

With all precautions made, let us hope that the need for them never arises. But, if it does, you will be well prepared. Δ Δ



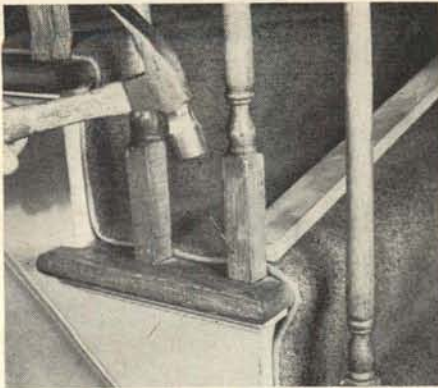
Following the instructions with the Fastway "Jr." tool, we made a couple of test fastenings, driving screw studs into this slag block. We found that the harder the material, the better the studs hold.

ONE OF THE MOST INTERESTING and useful tools we have tested in the Model Shop is this tool that drives specially-pointed screws and nails into concrete, concrete block, mortar, brick and even steel. The tool has just two parts, a handle grip and a driver. You provide the power with a 2-lb. sledge. Our tests included driving a $\frac{1}{4}$ -20 screw into a concrete block, and four into a poured-concrete slab to attach the flange for a metal railing. Furring strips are attached to a basement wall by driving the nails through the wood and into the concrete. Retail price of the tool is \$7.98, including an assortment of drive pins. At your local hardware store or write to: Fastway "Jr." Kit, Fastway Fastener, Inc., East 1676 28th St., Lorain, Ohio. Δ Δ

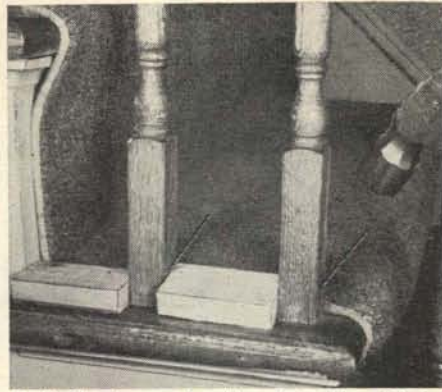
FASTWAY DRIVER



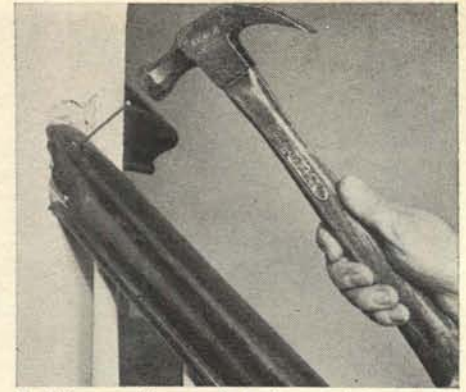
One-step operation of driving screw studs into a concrete slab for attaching a railing saves a lot of time and is more accurate than using other types of fasteners. A 2-lb. sledge and muscle are required to operate.



1. Stair railings become "rocky" when baluster dowels loosen in tread holes. Nails help swell dowels, reinforce fastening. Note length of wood that braces baluster while it is nailed.



2. Nails also may be driven into sides of balusters, with short blocks between each to prevent them from turning when nails are driven. Countersink nail holes, fill with putty.



3. Where railing end is fastened directly to wall, drive in a few additional nails directly into the wood. Chipped plaster around railing end can be patched and smoothed.

Repairing A Stair Railing

RALPH TREVES



4. If necessary to disassemble a railing, lift balusters from bottom so their dowel pins clear treads. Pins are usually about 1 in. long. Pry up each baluster carefully to prevent damage.



5. Hand rail and end volute are joined together. Lift off in one piece from newel-post dowel. Railing joint may have dowel pin or screw stud that can be tightened to eliminate looseness.



6. Newel post at the lower end of stair railing has long, turned end that projects and is fitted in deep hole in the tread. Stud at bottom fits in floor plate or joist.

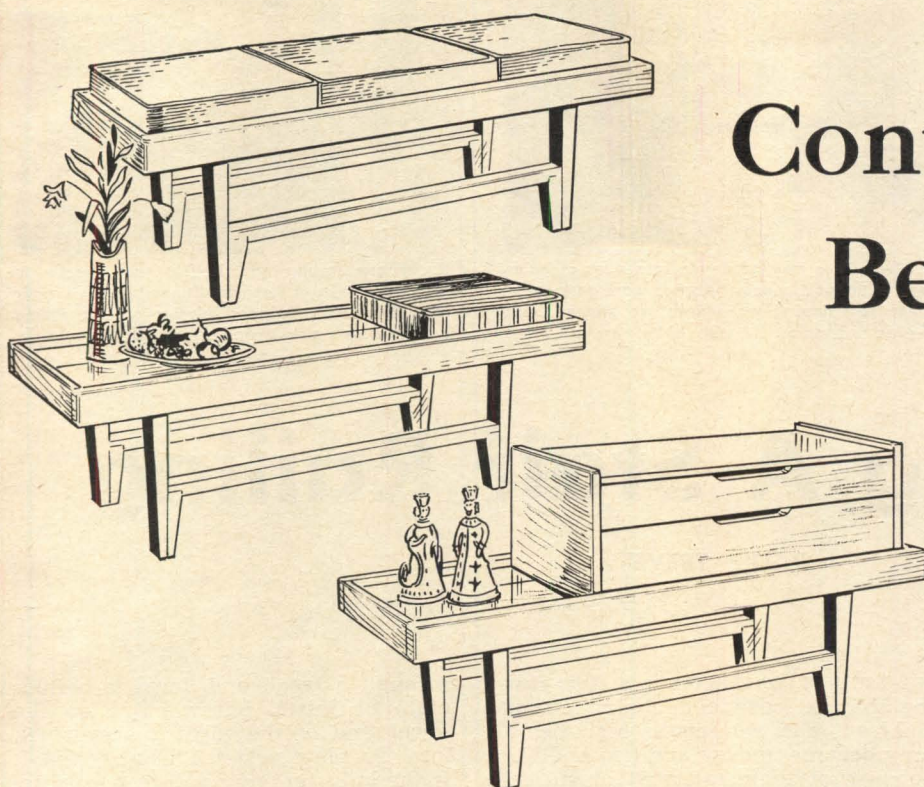


7. If the hole in the floor plate or joist has become enlarged, or if screw stud is loose in post, a larger one should be used. Larger-diameter screw will drive firmly, hold post rigid.

NO ONE HAS CONFIDENCE in a stair railing that is loose and shaky. Young children, and women in high heels, may become uneasy and trip and fall because of their mistrust of such a support. And, there is always the chance that a weakened railing may break away.

Sometimes a single fault may be corrected to eliminate the looseness. In the case of a badly neglected staircase, however, it may be necessary to remove and reassemble the balusters and railing, Figs. 4 and 5. There are just two basic types of stair railings: Free-standing and wall-hung. A free-standing unit is supported by balusters and newel posts, although the upper end may be fastened directly to a wall, Fig. 3. Square balusters are turned on the lower ends to fit in holes in the stair treads, while newel posts have a similar, but larger extension that fits

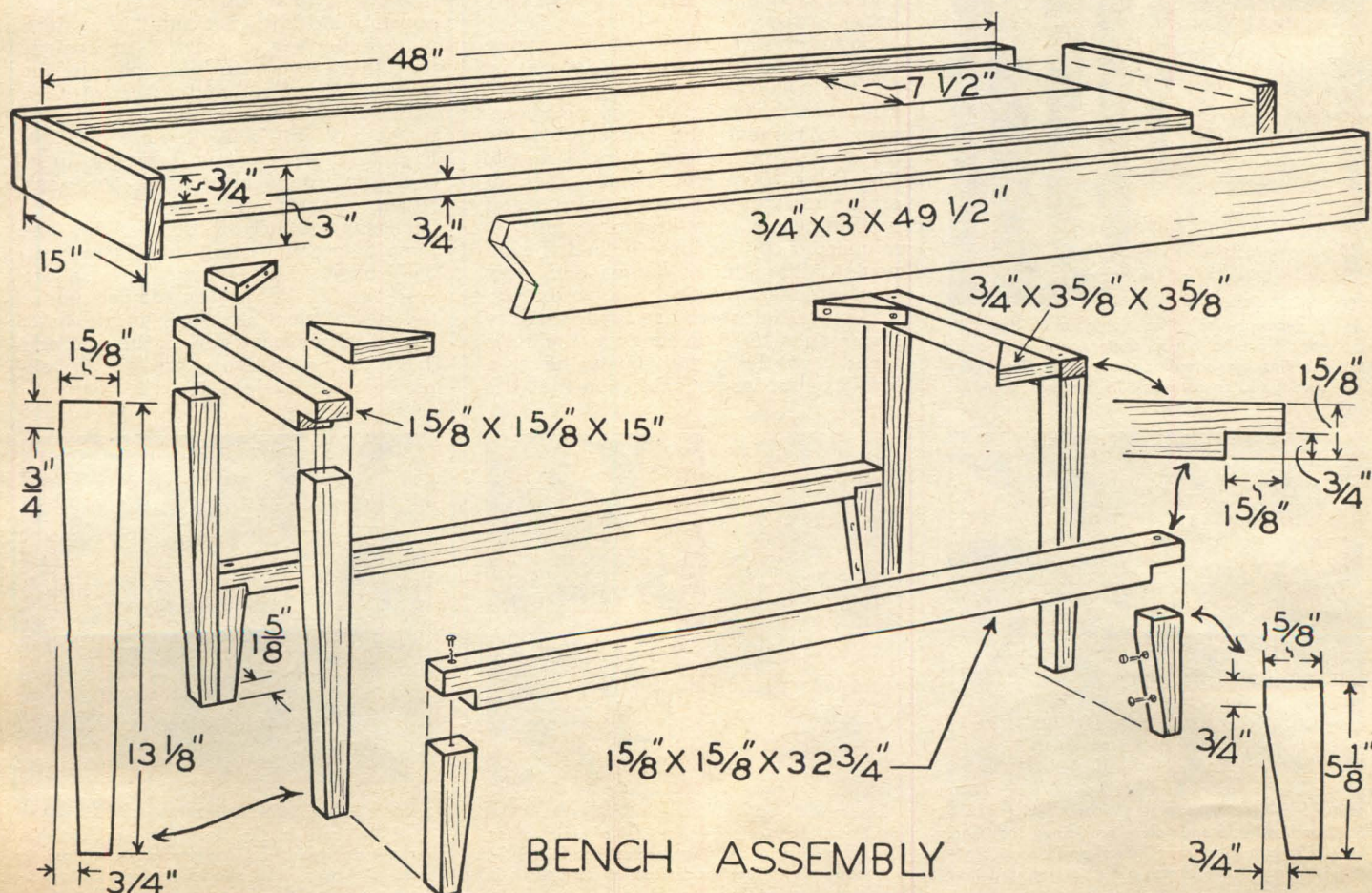
through a tread and down to a floor plate or joists. Screw studs on the lower end of the turning are driven into the plate or joist, Figs. 6 and 7. If the balusters of a railing are loose, long finishing nails can be toe-nailed into them to reach the tread on the opposite side, Figs. 1 and 2. The nails also expand the turned extensions to tighten them in the holes in the treads. A railing end attached to a wall can be tightened by driving nails through it into a wall plate or stud, Fig. 3. If a newel post sways, or if the joint between railing and end fitting, Fig. 5, are loose, it may be necessary to lift off the railing. The joint between railing and fitting can be broken and re-glued, or a larger stud installed. If the dowel under the newel post is loose in the hole, Fig. 6, saw a slot across the end and drive in a narrow wedge to expand it for a tight fit. △ △



Contemporary Bench-Chest

THIS FUNCTIONAL-FURNITURE project is of "Danish-Modern" design, with clean, simple lines. An added advantage of the design is that it makes for easy construction. Versatility of the unit makes it usable in almost any room in the house.

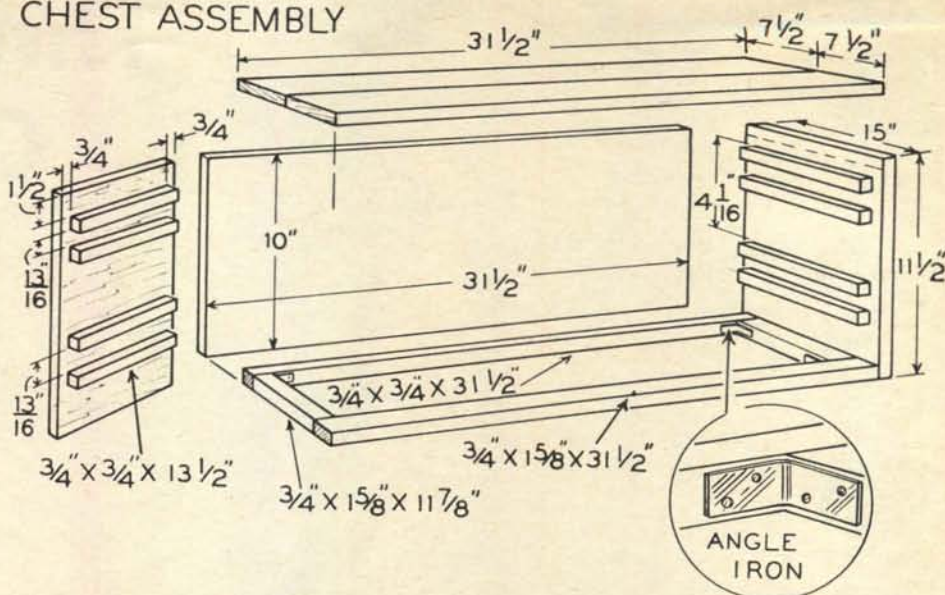
For most parts of the unit, 1-in. solid stock or $\frac{3}{4}$ -in. hardwood-faced plywood is used. For the legs 2 x 2s (approx. $1\frac{5}{8}$ x $1\frac{5}{8}$ in. finished) are required. Start by laying out all the pieces on the lumber, saw them out



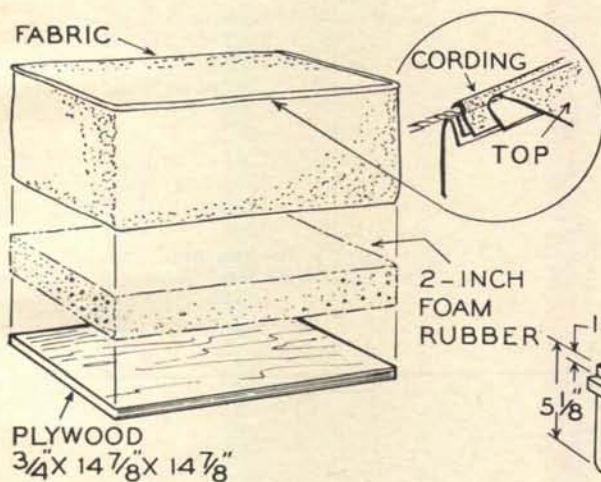
and true up to required size. Assemble all parts with glue and screws. For the bench, join side rails to short legs, and end rails to long legs. Drive counterbored screws through the short legs into the long ones. Attach top boards over end rails, position fascia strips, then invert the unit and attach glue blocks.

Assemble the bottom rails of the chest shell and brace with angles. Attach drawer guides to sides. Attach back and sides to rails and fasten top boards. Check this unit to make sure it fits inside fascia strips on bench. Attach drawer glides to the side members of the drawers, and glue blocks flush at the front and $\frac{3}{8}$ in. from the back on the inside surfaces of side members. Nail on the bottom and position the back. Drive screws through glue blocks to position front flush at top of blocks and sides as indicated.

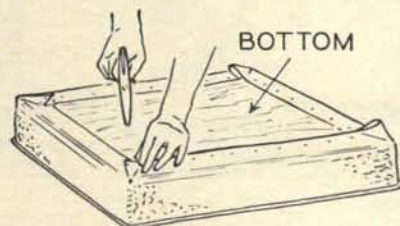
CHEST ASSEMBLY



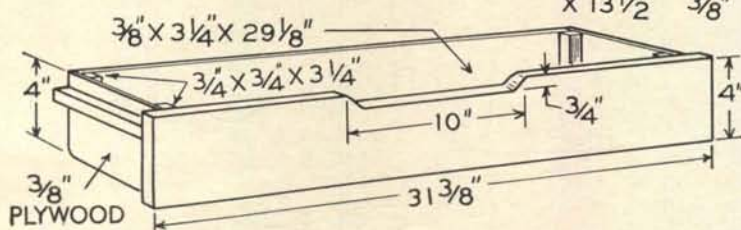
FABRIC



CUSHION ASSEMBLY



PLYWOOD
3/4" X 14 7/8" X 14 7/8"



DRAWER ASSEMBLY



Trim glides so drawers operate smoothly. An allowance of 1/16 in. is figured at top and sides of the drawers for clearance, but this may have to be increased.

Cut a base of 3/4-in. plywood for each cushion. Two end cushions will be of the dimensions indicated; if a third, center, cushion is used, it will be 18 in. long. Cut 2-in. foam rubber or urethane foam for cushions. Foam rubber cushions of the correct size also can be purchased from some mail-order houses. Cement the cushions to the plywood, then fit and sew a fabric cover as indicated. Tack or staple the fabric to the underside of the plywood bases. △ △



Here 3-way seat is used as a portable high chair with the removable cushion in place. Seat is held on chair by fitting U-shape brackets over chair back.

After all parts are cut out they are painted white. Clown face can be left unpainted if you wish different colors than shown.

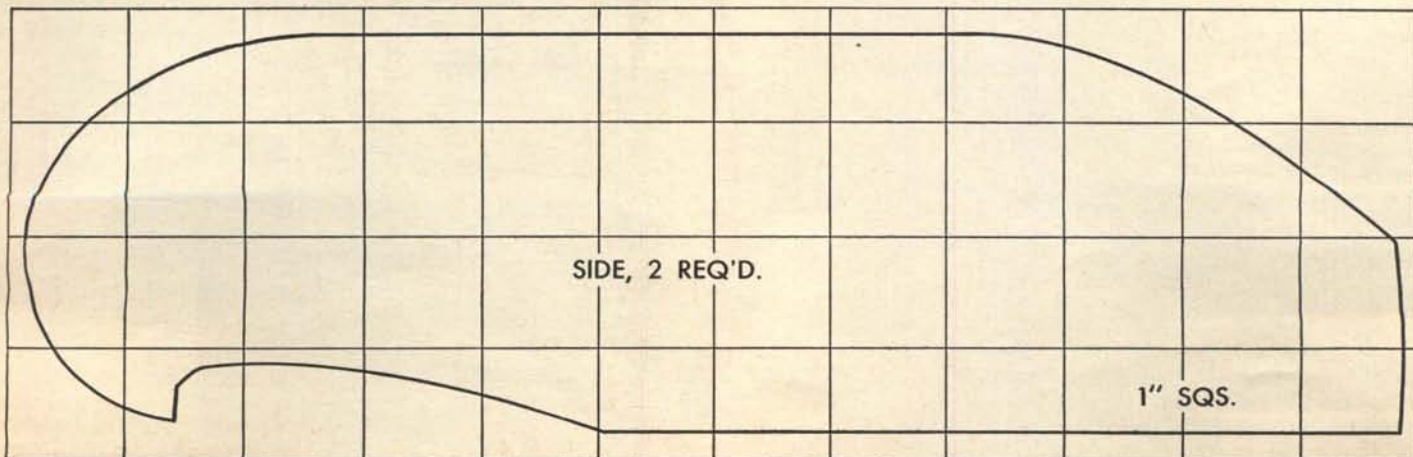
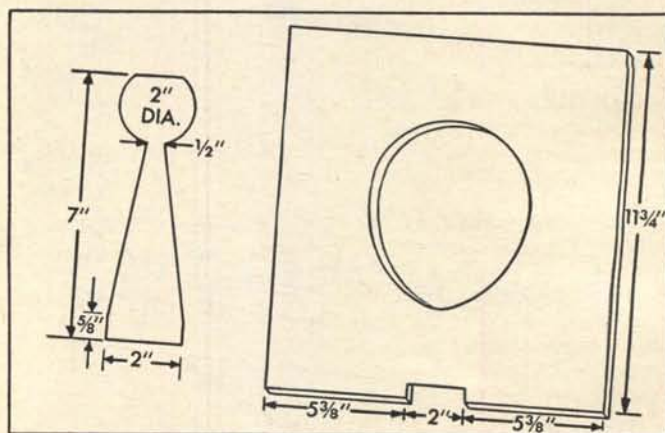


Three-in-One Child's Seat

DONALD X. FENTON

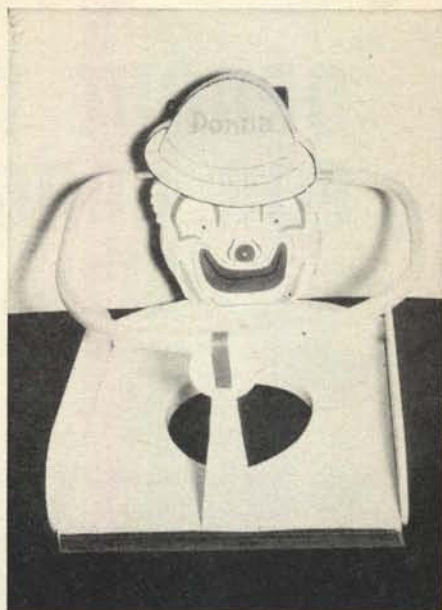
ANYONE WHO HAS travelled with a small child will appreciate the advantages of this seat that takes the place of a portable high chair, training seat and car seat.

Start construction by enlarging the patterns for the sides of the seat and clown-face back. Use $\frac{3}{4}$ -in. plywood or 1-in. solid stock for the clown face, seat bottom and base for the removable cushion. For the sides and key-hole-shape stop strip, $\frac{1}{4}$ or $\frac{3}{8}$ -in. plywood is used. Round all sharp edges and sand all surfaces smooth. Apply two coats of shellac, resand all surfaces and apply two coats of white enamel. When the paint is dry, place the pattern of the clown face, on which the features have been drawn, on the painted wood and mark all lines with a sharp lead pencil. The impressions of the lines will be shown on the painted surface and can be traced with a pencil to make them show clearly. Use quick-drying model-airplane paint to color the fea-





Clown face is painted, using brilliant colors of fast-drying model-airplane paint. Hat is solid color with child's name on it.



Rubber or plastic tubing is slipped over 36-in. length of $\frac{1}{4}$ -in. aluminum rod that is bent to shape on pressure cooker or other round shape.



Safety harness can be snapped to guard rail alongside clown-face back when seat is used in car. Felt on bottom wraps up on front edge.

tures of the clown. The baby's name is painted on the clown's hat.

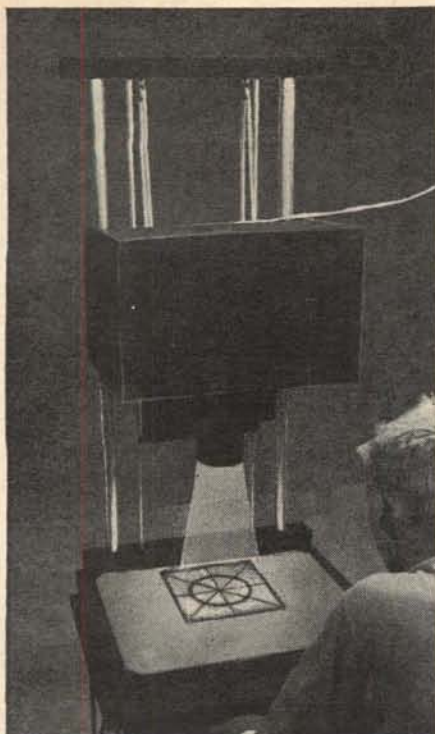
Measure $7\frac{1}{2}$ in. from the bottom of the clown face and drill a $\frac{1}{4}$ -in. hole 2 in. deep into each edge to receive the ends of the $\frac{1}{4}$ -in. aluminum rod that is bent to form a guard rail. Bend the 36-in. length of rod around a large pot or other round form, leaving 3 in. on each end straight. Plastic or rubber tubing is slipped on the rod before bending. Assemble the seat bottom, back, sides and stop strip, using glue and flathead wood screws. Countersink all screw heads and fill with wood putty. Fit the rod in the bored holes in the seat back, then bend and shape this guard to rest on the top of the vertical stop piece. Sand a clean spot on the rod just above the leg stop and use a bit of epoxy-base adhesive, such as Plastic-Mastic, to fasten the rod to the stop. On the original a strip of felt was fitted over the rod and stapled to each side of the stop piece.

Felt is used to cover the underside of the bottom and the back. Two 12-in. lengths of $\frac{1}{8}$ x 1-in. steel flat are bent in U-shapes, drilled for wood screws and attached to the seat back. These brackets grip the back of a car seat, and also fit over a chair back. They are covered with felt. To make the removable cushion, cement foam rubber to the plywood base, then wrap sheet plastic over the assembly and staple the edges to the underside of the plywood. Cement and staple felt to the plywood, and cushion and seat are complete. $\Delta \Delta$

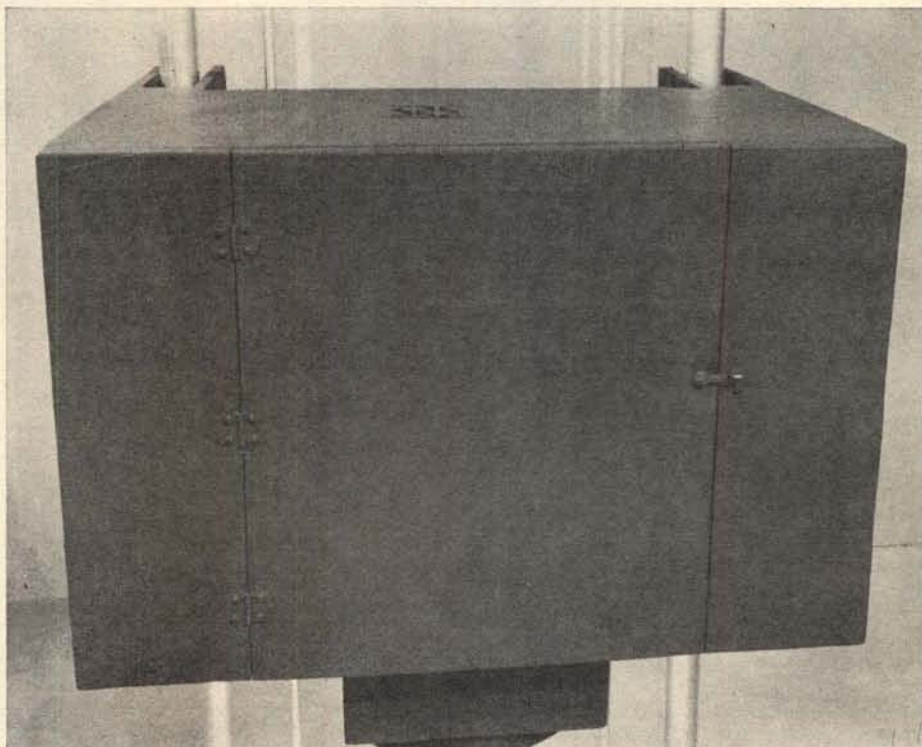


OPAQUE PROJECTOR FOR LARGER COPY

FRED STEBBINS



1. Here completed projector is being used with a focusing card to allow the operator to become familiar with mechanics of the unit, its capabilities and limitations.



2. Close-up of the front of the projector cabinet shows simple latch used on the door, arrangement of the hinges. At the top of the cabinet can be seen the grill through which heated air from inside the unit is expelled by the small blower.

DESIGNED AND BUILT especially for WORKBENCH readers, in answer to requests for an opaque projector that would handle larger copy than the usual low-cost unit, this model accommodates copy up to 10 x 10 in., and will project a reduced as well as enlarged image.

All materials for the projector can be obtained locally except for the mounted lens and the blower. Sources for these are in the Material List.

The base for our projector, Figs. 1 and 9, is a piece of a solid-core door, picked up in the bargain rack at a lumberyard. As a substitute use a sheet of $\frac{3}{4}$ -in. plywood supported on a frame of 2 x 2s. Fit the top with a piece of $\frac{1}{8}$ -in. tempered hardboard. Two 4-ft. lengths of $1\frac{1}{4}$ -in. do-it-yourself tubing are fastened to the base with flanges, Fig. 6. For added strength a hardwood strip $2\frac{1}{2}$ x $2\frac{1}{2}$ x $23\frac{1}{2}$ in. was drilled for the tubing, notched for the flanges, then held with lag screws driven up through the base. The $\frac{3}{8}$ x 48-in. aluminum rods that guide the counterbalance box also are fitted through this strip. Blind holes $\frac{3}{4}$ in. deep are drilled in the strip that fits over the tops of the tubes and rods, Fig. 9.

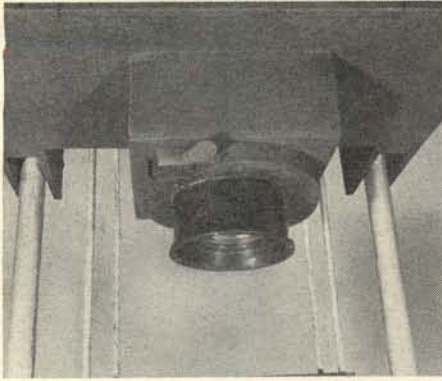
Build the light box first, Figs. 2 and 9, but leave the front off until you have attached the guide-roller assemblies by driving screws from inside the box, Fig. 15. Note that the interior of the light box in Fig. 15 is incorrect, it being one of the first prototypes built. The correct setup is shown in Fig. 5.

Rollers for the roller-guide assemblies are turned from a piece of hardwood, Fig. 12, to the dimensions given. Make the rollers as identical as possible, shimming up any irregularities with the felt strips that are cemented around the rollers, Fig. 13, to provide quiet operation. The four sides of the roller-guide assemblies are drilled together, Fig. 11, to assure that the "axle" holes align. Axles are $\frac{1}{4}$ x $2\frac{1}{2}$ -in. bolts. Drill the rollers for a loose fit on the bolts so they rotate easily. Sides of the roller boxes are $\frac{3}{8}$ -in. plywood, fronts and backs are 1-in. stock. Assemble the boxes with nails and glue. Attach to the light box.

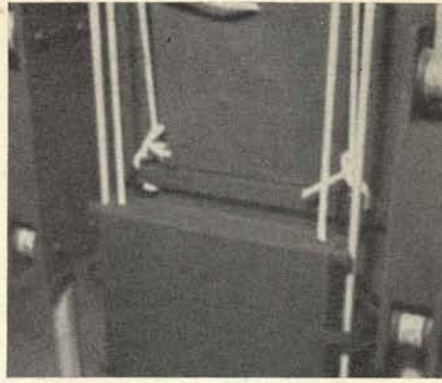
Temporarily install the mirror, Fig. 10, making sure it is exactly at a 45-deg. angle from the bottom of the box, Fig. 9, and centered in the width of the box. Find the center of the mirror and directly below it, at 45 deg. make a mark. Remove the

mirror and drill a small hole at that spot. On the outside of the box, using the hole as center, mark off a $5\frac{1}{4}$ -in. square and cut it out. Next, build the box that supports the lens tube, using 1-in. stock and nail and glue it in place. Cut out the split ring and glue and screw one side to the lens-tube, Figs. 3 and 9. Brackets for the surface-mounted porcelain light sockets are cut, bent and attached with the sockets on them. The aluminum can be bent for adjustment. The method of mounting the blower, Fig. 5, will vary with the type used, but it should be positioned to blow air out the top opening.

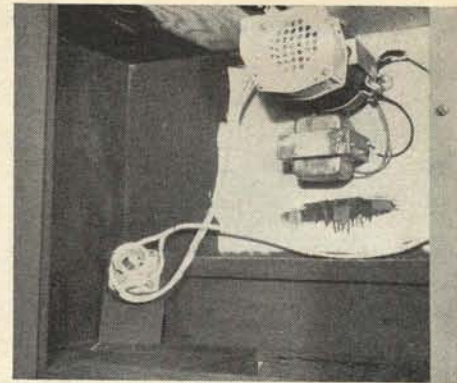
The counterbalance box, Figs. 4, 7 and 8 is filled with anything that will make its weight equal that of the light box. We used old sash weights, purchased at a junk yard. The weights were grooved on an emery wheel, then broken into smaller pieces to fit into the box. Epoxy resin



3. View of bottom of projector cabinet shows split-ring assembly that holds lens barrel in position. Half of ring is attached to projector, other half is free to move.



4. This photo shows details of roller guides, method of attaching ropes to counterbalance box. Halves of conduit connectors hold rope ends in notches, any small straps will do.



5. Interior of light box is painted flat black, except for area that will be behind mirror. Blower and transformer fit behind mirror. Light bracket is bent from sheet aluminum.

was poured over the weights, Fig. 7, to hold them solidly. Plaster of Paris, glue, etc. can be used instead of resin. To determine the required weight of the counterbalance, weigh the light box on a bathroom scale, make the counterbalance as heavy.

Sash cord or clothesline is fitted in holes in the counterbalance—or stapled or tacked to the top—and the counterbalance is slipped down over the rods. The sheet-metal loops, Fig. 4, are optional. The light box also is slipped into place, and the top cross-piece, to which pulleys are attached, is fitted on the tubes and rods. Support the light box at its maximum height, with the counterbalance resting on the base. Thread the cords from the counterbalance through the pulleys and down to the light box. A notched strip, measuring $\frac{1}{2} \times 1 \times$

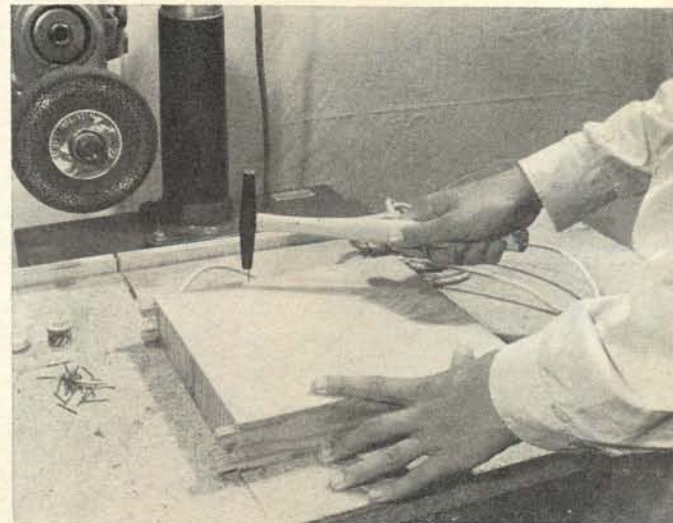
$13\frac{1}{2}$ in. is centered on the back of the light box, with its lower edge $3\frac{1}{2}$ in. from the bottom to receive the cord ends. Metal strips are used to clamp the ends when the cords are pulled taut. Release the light box, place your copy inside the door, Fig. 14, and you are ready to work. Raising the box increases the size of the image, lowering it reduces the size. Focusing is done by sliding the lens tube up and down. At some heights it may be necessary to pull out the lens tube and reverse it so the lens is closer or farther away from the copy. If the projector is used in a lighted room, thumbtack two black-sateen drapes to the sides and front, overlapping at the front. Make the drapes long enough to shield the base when the light box is at maximum height as it often will be.



6. Aluminum support tubes are attached to base with flanges. For added strength, a hardwood strip was fitted over tubes and lag-screwed to base that is part of solid-core door.



7. Sash weights used to fill counterbalance box were broken by grinding groove around circumference, then hitting with sledge hammer. Weights were broken into pieces so they would fit in smallest possible space, resin holds pieces solid.



8. Weight box was assembled with glue and nails. All parts of the projector were assembled with both glue and nails or screws, to assure maximum strength and long life. All surfaces and edges were cut neatly, sanded smooth for best appearance.

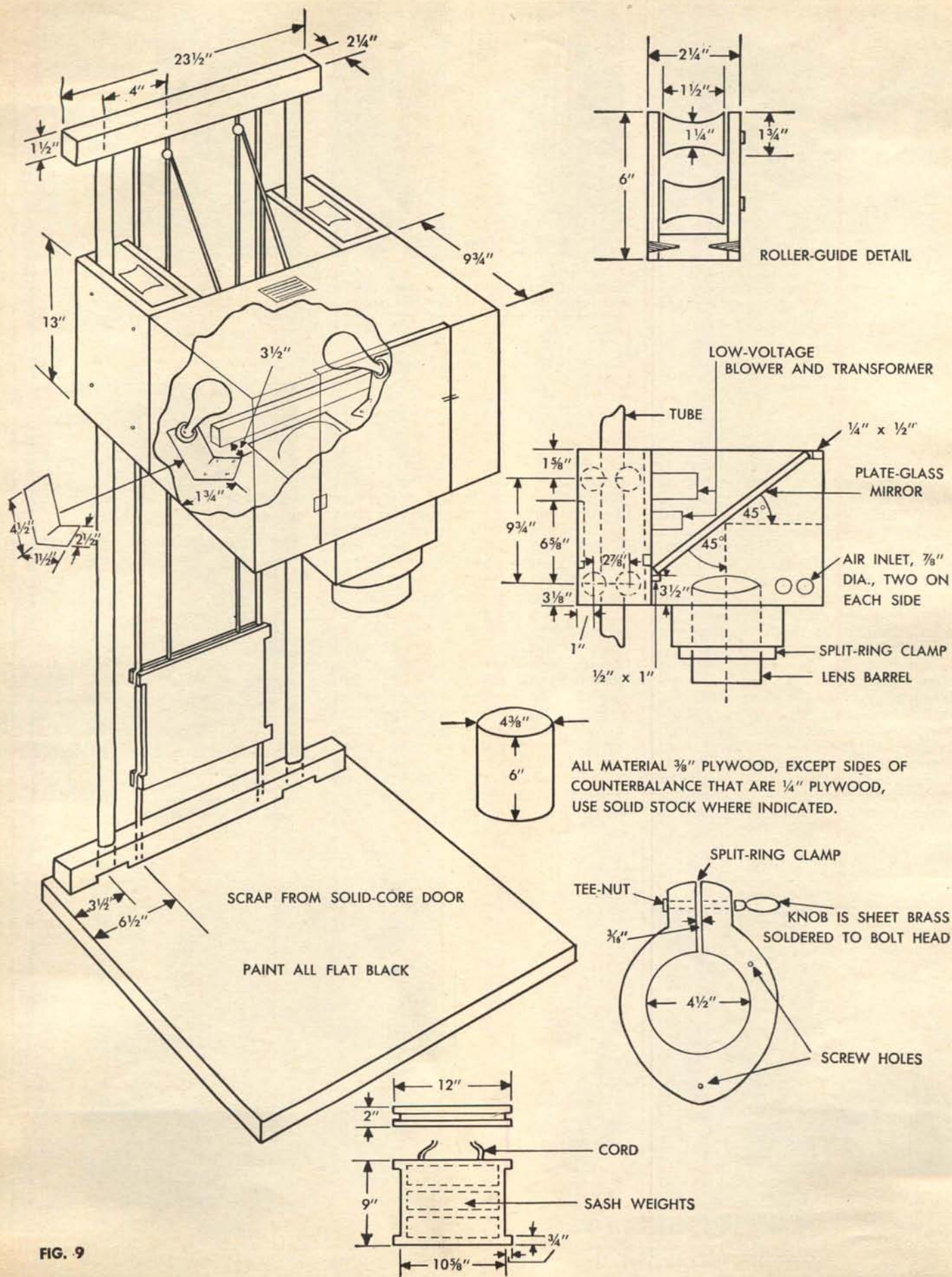


FIG. 9

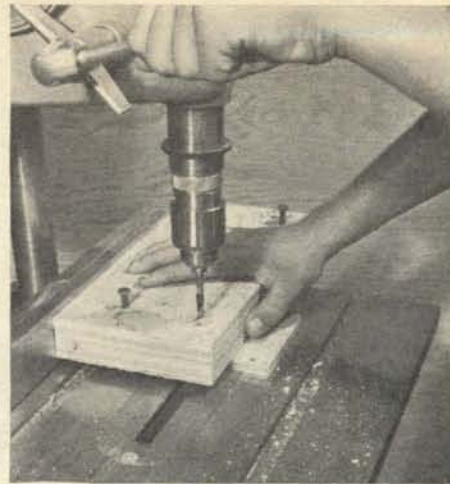
MATERIAL LIST

- 1—4 x 8-ft. sheet $\frac{3}{8}$ " plywood.
- 1—2 x 4-ft. sheet $\frac{1}{4}$ " plywood.
- 1— $1\frac{1}{4}$ " x 8-ft. aluminum tubing.
- 1— $\frac{3}{8}$ " x 8-ft. aluminum rod.
- 1—projector lens in Mount, Part No. 2-8812, from Edmunds Scientific Co., Barrington, N. J.
- 2—Surface-mounted porcelain light sockets.
- 1—blower and motor. Original was from Burstein-Applebee, 1012 McGee St., Kansas City 6, Mo., Part No. 22B70. Comparable unit from Edmunds Scientific is No. 101.
- 1—12" x 12" plate-glass mirror, back-silvered.
- 1— $4\frac{3}{8}$ " dia. lens tube, 6" long, can be fiber or cardboard. Ours was stovepipe, riveted, soldered, filed smooth.

Miscellaneous hardware, glue, nails, resin, flat-black paint, etc. Δ Δ



10. Mirror is held at 45-deg. angle by strips screwed to inside surfaces of light box. Little light reaches mirror from bulbs, black minimizes reflections inside box.



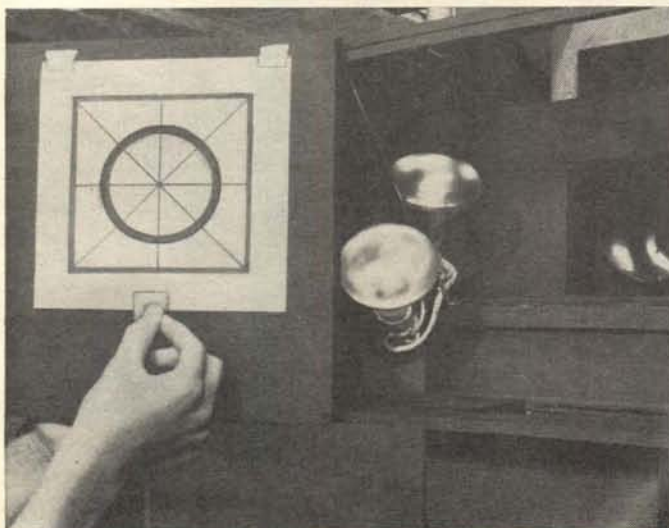
11. All four sides of roller-guide assembly are drilled at once. When first hole is drilled, drop in bolt axle to align pieces, also in second hole as indicated in photo.



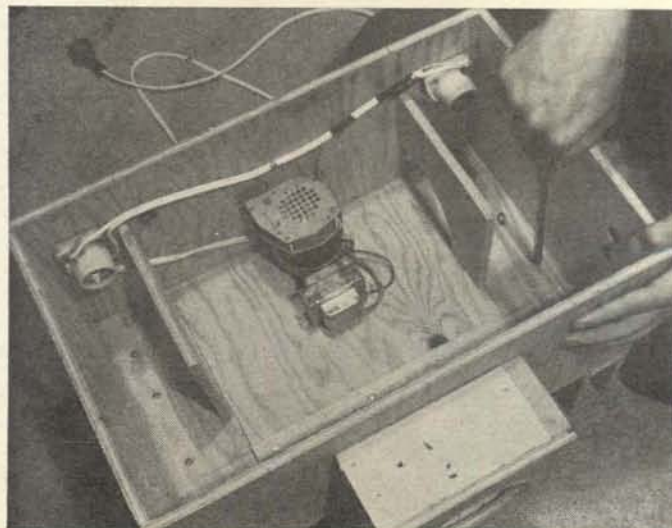
12. Rollers were turned on lathe from one long piece of stock. Band saw was used to cut them apart. If table saw is to be used for separating rollers, allow more space between the turnings. Rollers should be made as identical as possible.



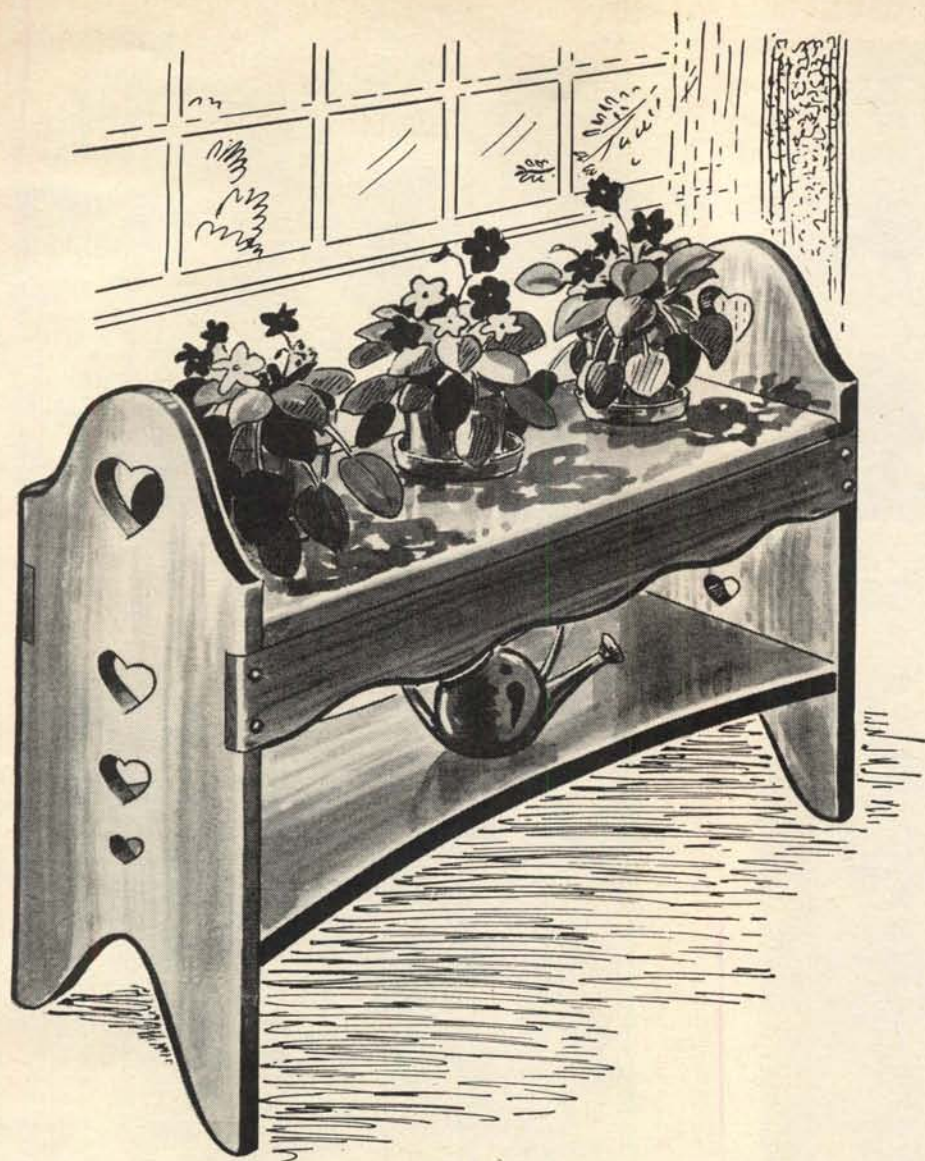
13. Strips cut from felt were glued on inside of split-ring that holds lens tube and also around all rollers. Quiet operation when lowering and raising the light box is assured by the felt on the rollers that bear against the two support tubes.



14. Short strips of drafting tape are used to hold copy on inside of door for projecting in reduction or enlargement. Thumbtacks or clips could be used, but tape is simplest and cheapest method, and neither copy nor door are damaged.



15. Roller guides are attached to light box from inside with wood screws. Note wiring that connects blower and lights so all go on when switch is operated. One of first prototypes, this box has light sockets and partitions in wrong positions.



Versatile Country-Pine Bench

ROBERTA L. FAIRALL

MATERIALS LIST

Cut from 12 lineal feet of 1 x 12 (approx. $\frac{3}{4}$ x $11\frac{1}{2}$ in. finished dimension) surfaced Douglas fir solid stock.

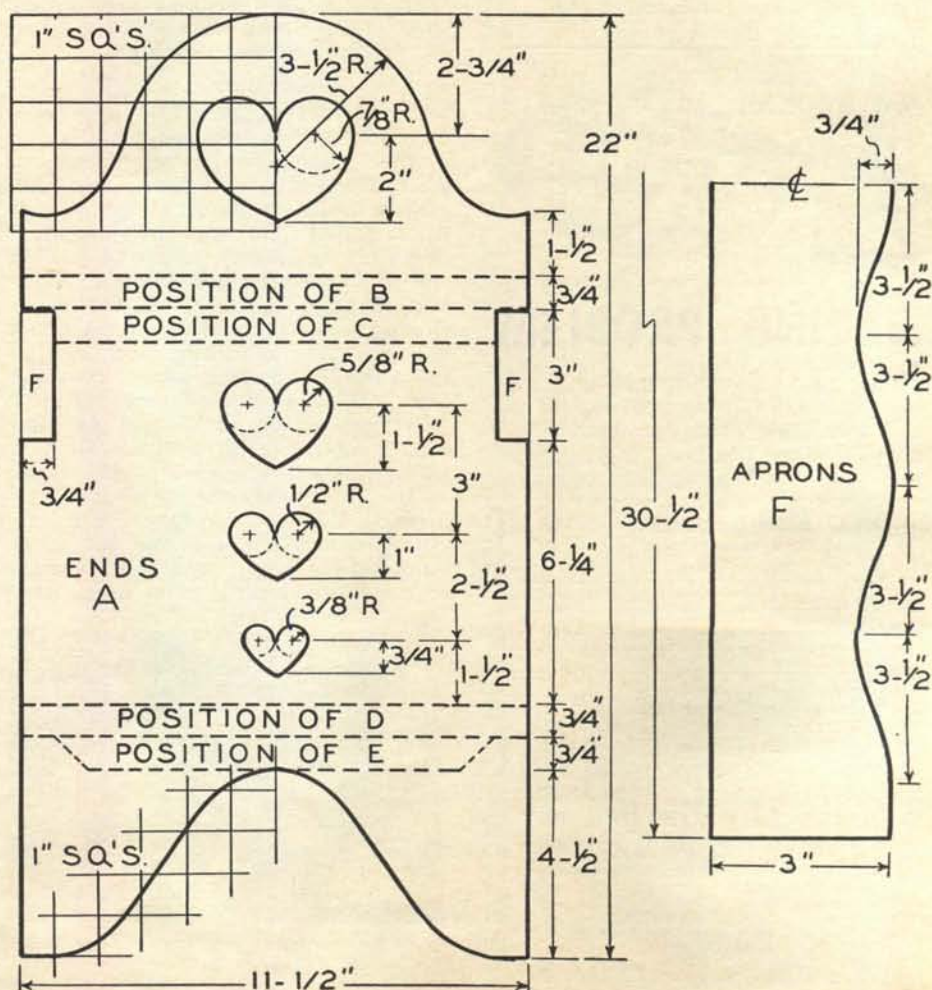
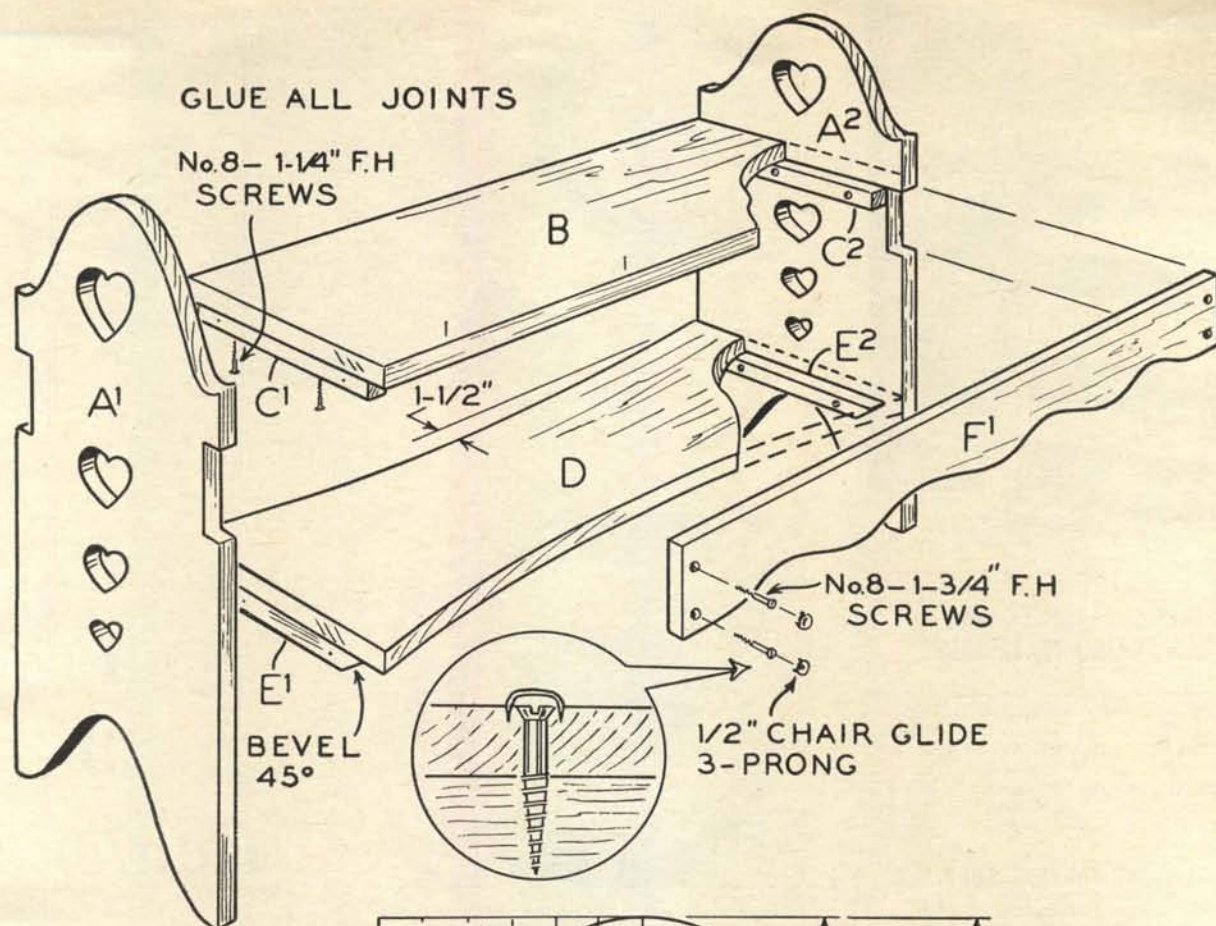
Item	No. Rqd.	Description	Size
A	2	Ends	$\frac{3}{4}$ " x $11\frac{1}{2}$ " x 22"
B	1	Seat	$\frac{3}{4}$ " x $11\frac{1}{2}$ " x 29"
C	2	Cleats for seat	$\frac{3}{4}$ " x $\frac{3}{4}$ " x 10"
D	1	Stretcher	$\frac{3}{4}$ " x $11\frac{1}{2}$ " x 29"
E	2	Cleats for stretcher	$\frac{3}{4}$ " x $\frac{3}{4}$ " x 10"
F	2	Aprons	$\frac{3}{4}$ " x 3" x $30\frac{1}{2}$ "

Miscellaneous:

8 No. 8— $1\frac{3}{4}$ " F.H. wood screws.
16 No. 8— $1\frac{1}{4}$ " F.H. wood screws.
8— $\frac{1}{2}$ " furniture glides (3-prong).
6d finishing nails.
White liquid resin glue.

THE OLD sleigh seat, redolent with a mellow charm of yesteryear, suggests this design for an easy-to-build piece of country-pine furniture. Set it in front of a window to display plants and flowers; or if you choose, let it hold magazines, or books.

Hand tools build it from twelve feet of 1 x 12 pine solid stock. Be sure that this is well-seasoned lumber. Screws and glue strengthen simple butt joints. Follow dimensions given to lay out patterns on heavy paper for ends, aprons and stretcher. Measure the seat and cleats directly on the lumber, and saw just a little outside the lines to allow for finishing. True up and sand pieces to exact dimensions using No. 1 garnet paper to glaze end grain. Then, put your sleigh-seat bench together with glue, screws and finishing nails following these easy steps:



1. Join cleats to seat and stretcher.
2. Next, attach seat and stretcher to ends by driving screws through from inside cleats into ends.

3. Secure aprons in mortises.

4. Nail seat to aprons, and countersink nailheads. Cover screw and nailheads with wood filler.

5. Use a wood rasp to file edges and corners generously and somewhat unevenly for that well-worn look. Cover screwheads on the aprons with furniture glides to simulate doweled joints.

Finish the project with light brown stain brushed on and wiped off to bring out the highlights. Let dry, and cover with two coats of spar varnish. Buff away the shine with No. 4/0 steel wool. Enamel the chair glides brown, and finish with several coats of quality paste wax. △ △

Bore overlapping holes and finish the heart-shape openings with a keyhole saw. Cut them undersize to allow for sanding.



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Arrangement of circular and rectangular frames is attractive. Profile of the stock for both types of frame is identical, being cut with same bit.



Close-up of circular frame shows attractive grain effects possible when frame is made from glued-up stock that is jig-sawed to shape.

Picture Frames With Router Bits

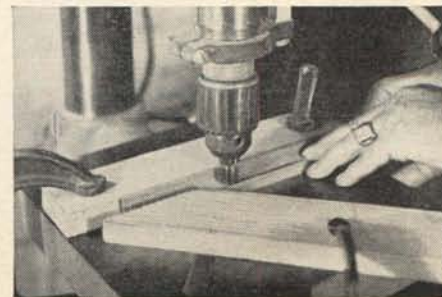
WHILE A SHAPER generally is considered the tool to be used for making picture frame stock, lack of one in your shop does not mean that you cannot make beautiful framing. Router bits chucked in your drill press or radial-arm saw will permit you to make an almost infinite number of frame profiles. Lowering or raising a bit in relation to the stock will change the profile, and moving the stock against or away from the bits will produce the same result.

Straight stock is shaped by running it against a bit with the aid of a straight fence clamped to the table of the drill press. A radial-arm saw already has such a fence. For circular frames, an L-shape fence, or guide, is cut from wood and clamped to the table. It is best to make sev-

eral passes, or cuts, cutting deeper each time, to avoid overworking a machine and also to produce a smoother finish. Frames of irregular or free-form shape also can be made with router bits. They can be cut free-hand, with a single pin as a guide to hold the stock the proper distance from the bit, but the use of a pilot bit (a bit that has a projecting tip against which the stock is held) makes this job simpler and safer, as well as more accurate. The one disadvantage of a pilot bit in this case is that the distance from the center of the bit to the stock cannot be changed to vary the shape of the stock profile. However, the bit can be raised and lowered to change the profile; the only limit is the length of the pilot. Some portion of the pilot



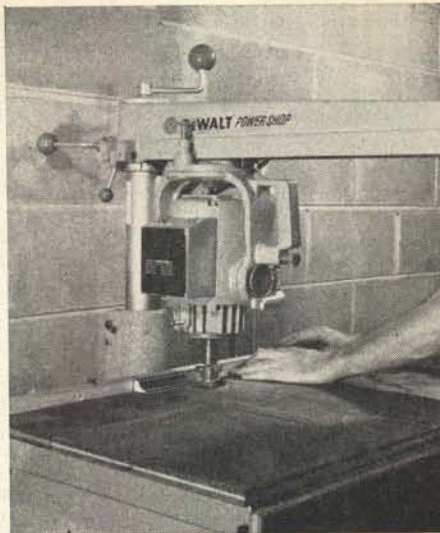
Set-up for making circular frame with router bit chucked in drill press is shown. The L-shape fence can be adjusted to change stock profile.



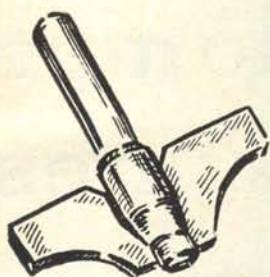
Straight picture-frame stock is shaped by running it against a router bit, using a straight fence to keep it aligned at the proper distance.

must bear against the stock.

For the groove on the back side of the frame into which the picture and glass are set, a 1/4-in. mortising bit can be used for circular, oval and free-form frames, while a saw cut is used on straight stock. Keep in mind that if the finished front face of straight stock will be quite narrow, it is best to cut the groove on the back first. This will assure that you have a wide enough face to permit holding the stock flat on the table while running it into a router bit or into a saw blade. △ △



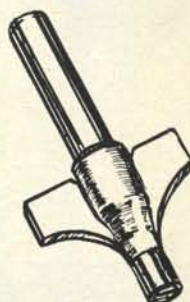
Saw table already has a straight fence, motor is adjusted on the radial arm to position the router bit in relation to the stock being shaped.



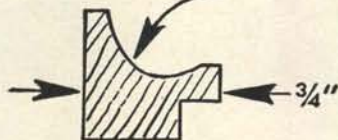
3/4" CARVING



5/8" BALL END



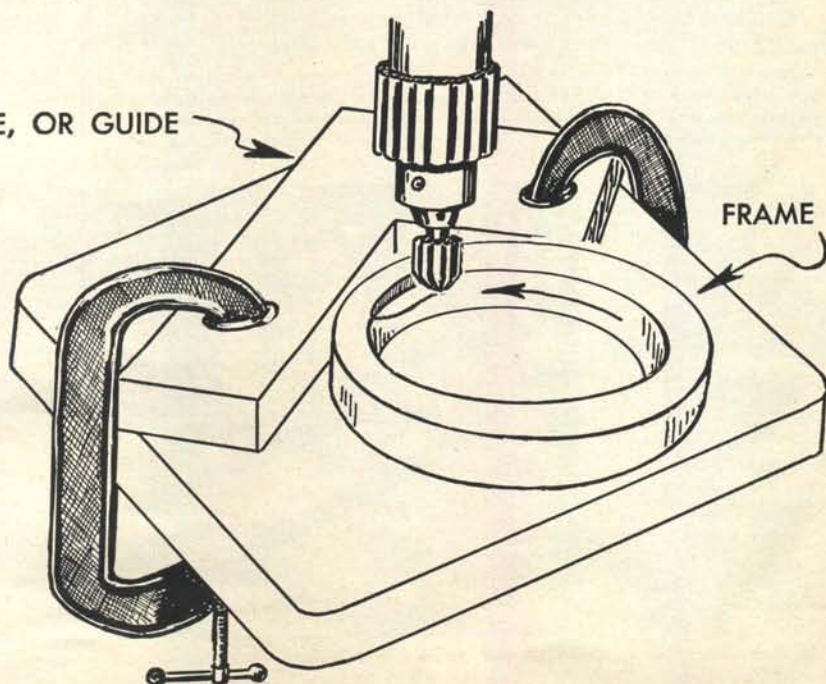
PILOT BIT



3/4"



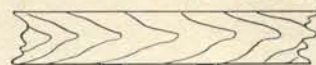
FENCE, OR GUIDE



SET-UP IN DRILL PRESS FOR CUTTING CIRCULAR FRAMES

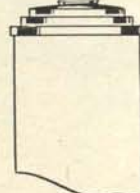
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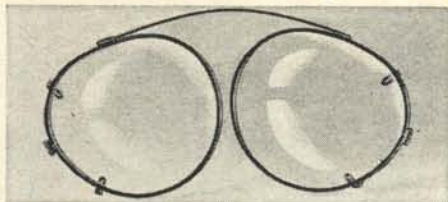
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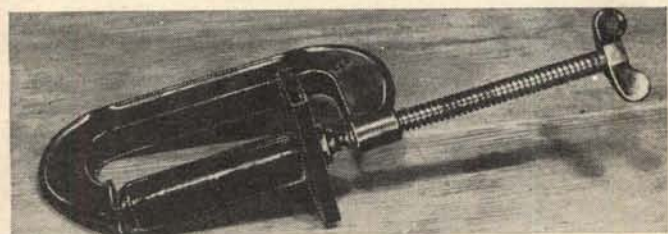
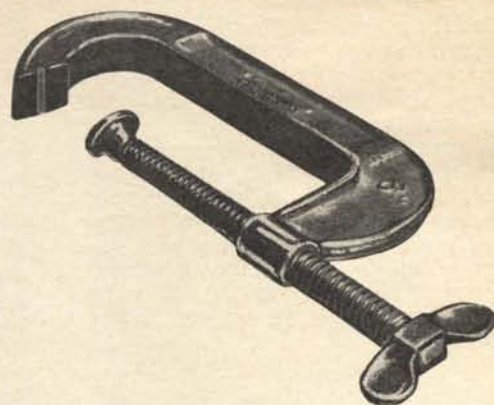
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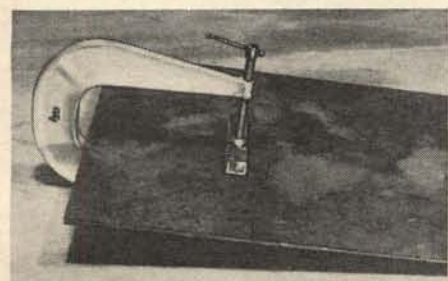
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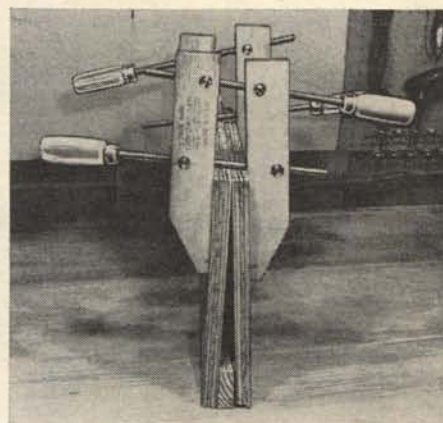
Handscrews, Clamps And Fixtures



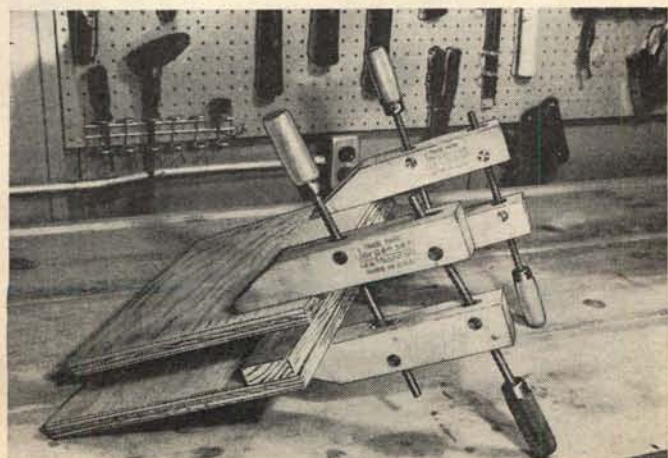
Most widely used of all types, C-clamps are available in a great variety of sizes, strengths and throat depths. As with any tool, make sure you buy a quality product. Simple V-notch in the fixed pad of the clamp will permit gripping round and irregular-shape objects, an easy-turning screw with clean threads permits opening the clamp fully to use for clamping on the ends of workpieces. Deep-throat clamps are extremely useful, must be strong to accept the extra strain of this particular design.



Probably not too well-known to home-shop owners, a strap clamp will do jobs that are impossible with any other type of clamp, will produce tremendous pressure.



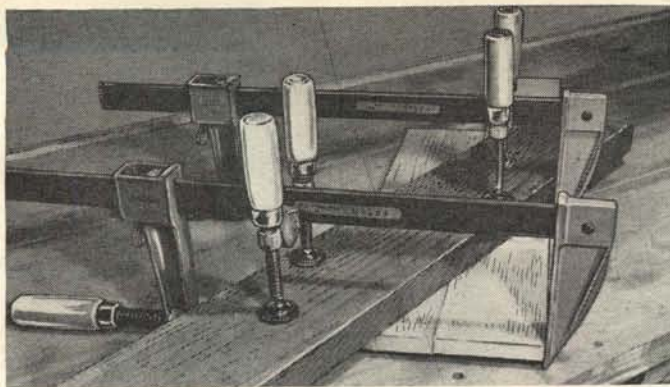
Handscrews, usually thought of as tools for working on furniture actually have many applications where an extremely strong, large-jawed clamp is needed to do the job.



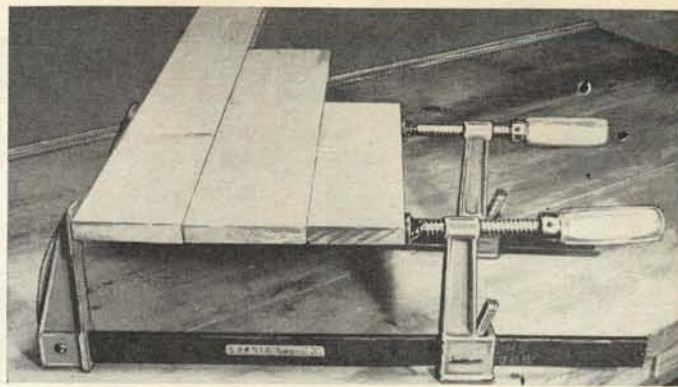
An advantage of handscrews, not found in most types of clamps, is the ability to use jaws parallel, as in this photo, or at an angle to each other, as in photo above. Handscrews are best all-around clamp, except for metals requiring welding.



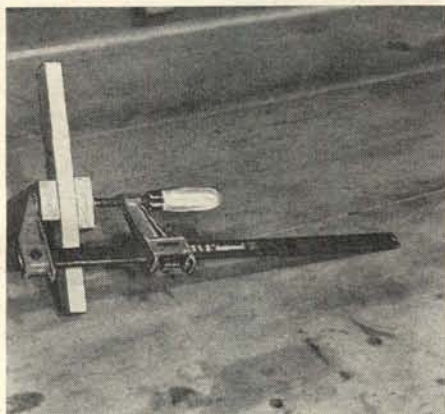
Heavy I-beam cross section of these bar clamps assure maximum strength for heavy-duty job, such as holding together 2-in. planks for the top of this workbench. Clutch on sliding member permits quick positioning and release at any point.



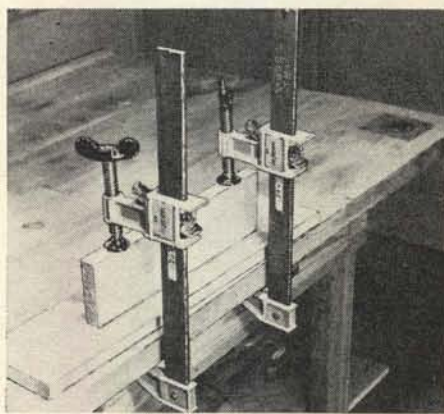
Edge-clamp fixtures are another item with which the home-shop owner might not be familiar. These fixtures are used with bar clamps to hold a member down on two or more boards that are being edge-glued, or to prevent an assembly from bowing.



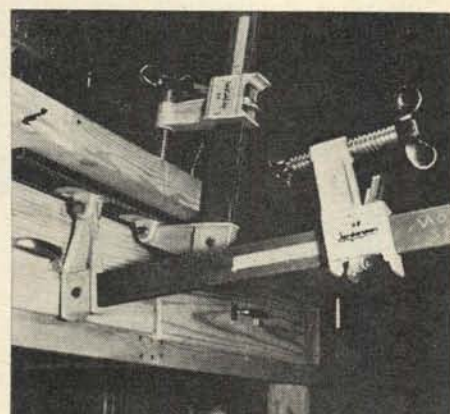
Medium-duty bar clamps without edge fixtures are used for jobs such as edge-gluing. These have 5-in. depth-of-throat, are available with $2\frac{3}{4}$ -in. depth-of-throat. Note that screw is in movable portion of clamp, rather than in fixed end.



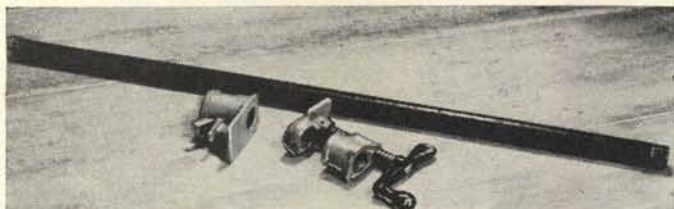
These very lightweight, quick-acting bar clamps are ideal for light fabricating, assembly and repair work. Price of the clamps is low, but quality is the best.



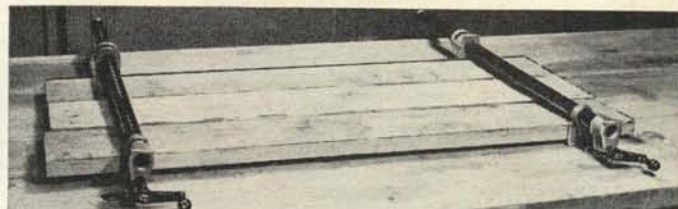
Hinged clamps can be used as clamp with swivel jaw, or may be bolted to bench. In Model Shop the clamps are fitted in special track under the edge of the workbench.



When hinged clamps are loosened from work, they can be dropped down to hang on pivot. Track under bench permits "sideways adjustment" in clamping action.



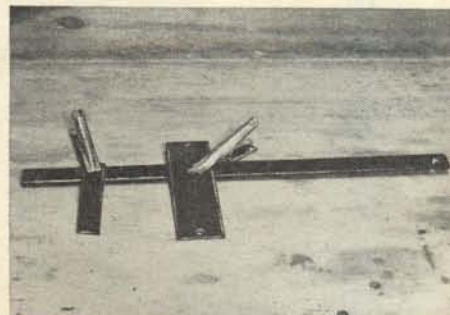
Low in cost and extremely versatile, clamp fixtures used on lengths of black-iron pipe are the best bet for a craftsman who wants an all-around selection of clamps that can be used on wood or metal, for bench work and for large projects outdoors.



For most jobs, a length of pipe 3 or 4 ft. long is fine. To extend the clamps, pipe couplings are used to add on any required length. Fast-acting clutches permit sliding the movable pad in position, the same as on assembled bar clamps.

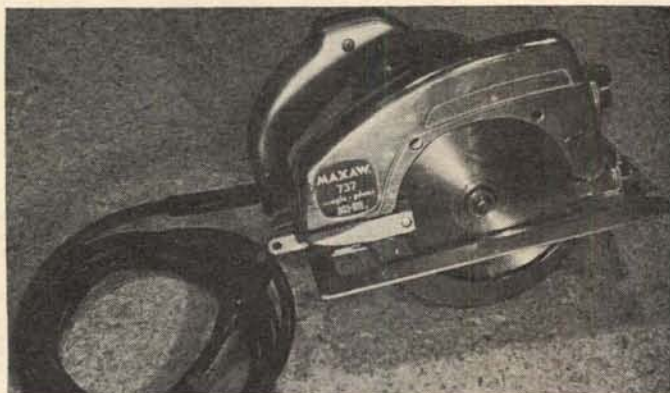
ALMOST EVERY JOB in a workshop requires a clamping device of some type. It may be a vise, or perhaps just a wedge driven between a piece of work and a couple of boards nailed to a bench top. Our Model Shop has an extensive collection of clamps that will handle every possible job. Some of the devices, such as C-clamps, are well-known to everyone. Others, such as handscrews and strap clamps, may not be as familiar. Quite likely there is a clamping device shown on these pages that will do a better job for you than a C-clamp, and there may be some that will handle operations you had considered extremely difficult, or even impossible. Our favorites are the clamp fixtures that fit on lengths of pipe. Fixtures are available for both $\frac{1}{2}$ and $\frac{3}{4}$ -in. pipe. We prefer those for the $\frac{3}{4}$ -in. pipe, as they are some-

what stronger and have a wider range of uses because of the added strength. Some of the uses to which we have put the fixtures are to support two partition walls almost 20 ft. apart and to clamp 2 x 4 braces on 4 x 4 fence posts being set in concrete, to show their versatility. Our strap clamp can hold a round or irregular-shape object up to 20 ft. in circumference. It has a canvas strap, but metal ones are available. They can be used on round shapes only. Handscrews, with their large, hard-maple jaws are the best all-around clamps. They will hold firmly on irregular surfaces and the wooden jaws are non-marring. All clamps in the Model Shop are from the Adjustable Clamp Co., 417 N. Ashland Ave., Chicago 22. For a catalog of their clamps, send them 25 cents for postage and handling. Δ Δ



Spring clamps are always handy to have on the workbench for those smaller jobs, such as soldering or tack-welding metal items. Also fine for aligning parts for holding on drill press.

Portable Saw Is A Table Saw



2. Unit tested in Model Shop was Cummins Maxaw. Only change made in portable saw was addition of hold-down spring on switch.

WHILE A PORTABLE ELECTRIC SAW is fine for rough framing and other on-the-job cutting, it seldom is accurate enough for cabinetmaking. The solution to this problem, and without spending money for two power tools, is to purchase a table in which the portable saw can be fitted. While most tool manufacturers, such as the Skil Corporation, whose unit is shown

in Fig. 1, make tables of this type, we personally tested the Cummins unit in the WORKBENCH Model Shop. The portable unit was the Maxaw 737 rated at 6 $\frac{3}{8}$ -in. depth of cut, Fig. 2. To fit the saw in the table, the shoe is tipped at an angle, then the unit is slipped into place, Fig. 3. Once in place, the saw can be adjusted back to 90 deg., or another angle. The



1. Shown is Skil Universal Saw Table, Model 528, that converts most Skil righthand-blade saws into bench-type circular-saw models.

guard of the portable saw will operate as usual, Fig. 7, but for smaller pieces of work it is best to install the closure plate provided with the table, Fig. 4, which does cancel the operation of the guard. When making angle cuts, as in Fig. 7, the plate must be removed to provide clearance for the saw blade.

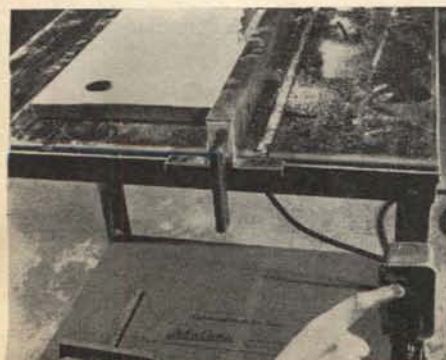
A receptacle into which the portable saw is plugged, Fig. 5, is provided with the table. A switch on the receptacle box turns the saw on and off. An accurate miter gauge, and easy-operating rip fence also are included with the table assembly, Figs. 6 and 7. All cuts we made with the setup were quite accurate, and any operation that can be done on any table saw can be handled. When making angle cuts, the saw motor had to be tipped from beneath the table, something that is done at the side of the table with a regular tilting-arbor table saw. Blade height must be adjusted from below also. $\Delta \Delta$



3. Shoe of saw is tipped, then unit is slipped into table. No hold-down screws are required for normal work, but saw can be bolted in place.



4. Closure plate, which cancels action of guard on portable saw is used to decrease size of table opening, is removed for angle cuts.



5. Switch on portable saw is held down with spring, saw is plugged into receptacle on table leg. Switch on receptacle box operates saw.



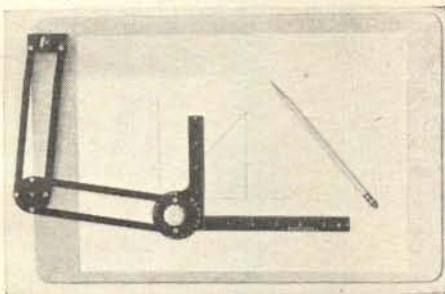
6. Rip fence provided with saw table operates easily, locks firmly in place. Tension on locking device is adjustable to compensate for wear.



7. Compound miters are no problem with portable saw fitted in table. Note that blade extends well above top of 2-in. lumber.

PORTABLE DRAFTING MACHINE

COMBINING THE FUNCTIONS of a pantagraph and T-square, this one-piece unit is a complete drawing board with all the tools required, except a pen or pencil. Fitted on its own drawing board, measuring 11 x 17 in., the unit is light enough to be carried wherever a drawing is to be made, yet well constructed so it will last for years. An excellent tool for the home-shop owner who makes working drawings for proposed projects, and for figuring those unusual and difficult angles that are required on some cabinetmaking and furniture construction. The pantagraph unit keeps all lines parallel, the square accurately produces any desired angle. Cost of the unit is \$8.50, from David Miller and Associates, P. O. Box 572, 259 So. Robertson Blvd., Beverly Hills, Calif. Other, larger models, at higher prices, also are available. All units are sold on money-back guarantee. Δ Δ



Small enough to be slipped into a drawer of the workbench, the Draftette unit is large enough to handle most home-workshop drawing needs. With a reasonable amount of care, the unit should last for many years of service.

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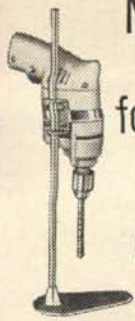
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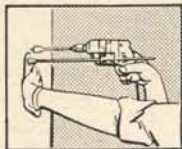


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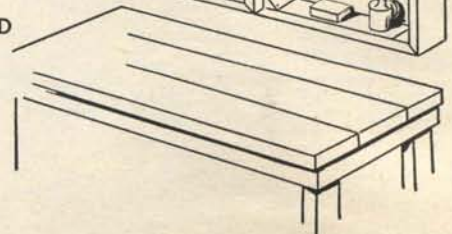
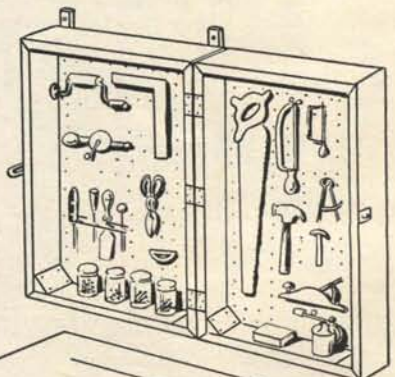
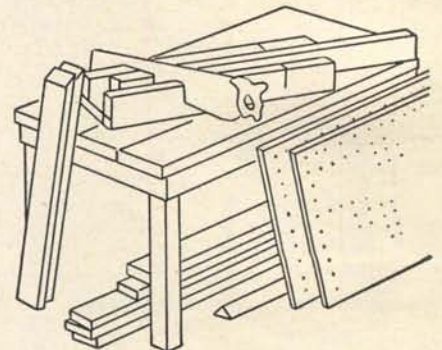
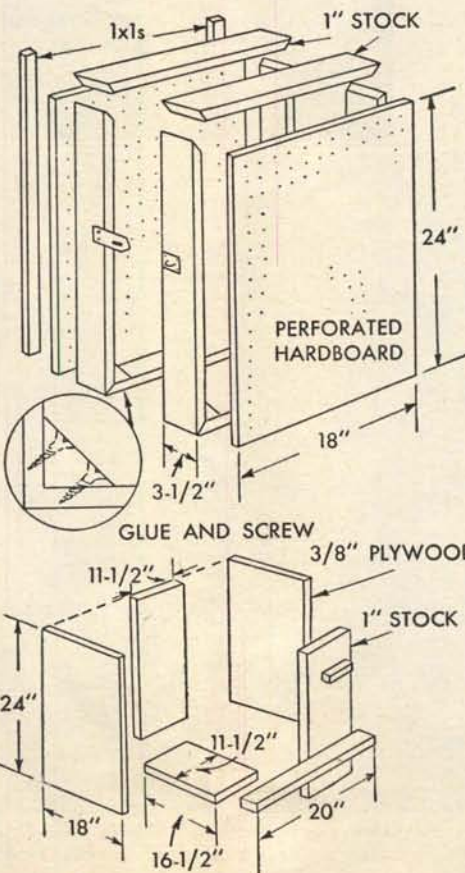
HI SIBLEY

IS YOUR WORKBENCH A CLUTTER of tools
and scraps of material after a job?
Here's your solution; a handy cab-
inet for holding your tools, plus a
scrap box for under the bench that
makes clean-up a snap.

Only hand tools and a miter box
are required for the two items. Per-
forated hardboard used on the backs
of the cabinet can be fitted with fast-
eners to hold the tools, shelves can
also be fitted if you wish. The frame
of the cabinet is reinforced with
corner blocks that are glued and

screwed in place. Note that the di-
mensions of the perforated hard-
board are 18 x 24 in., which is a
stock size that will make a cabinet
large enough to hold all tools except
a standard-size handsaw. If the lat-
ter is to be included, make the cab-
inet 30 in. high, rather than 24 in.
Two clearance strips are nailed to
the back of the cabinet to hold it
away from the wall so that fasteners
can be inserted in the hardboard.

The trash bin is made as detailed,
with a projecting footboard for tilt-
ing it forward. Dimensions of the
trash box can, of course, be changed
to suit a workbench size, and the
length of the footboard may be short-
ened to prevent it projecting out in
the way too far. A second box can be
made to hold scrap wood. $\Delta \Delta$

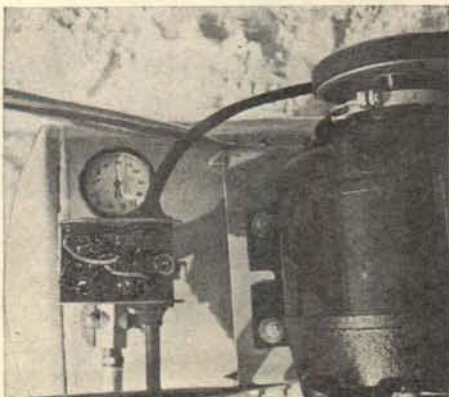


Portable Air Compressor



With tank charged with air, unit can be wheeled out to car, truck or tractor that is away from electric-power source.

PRESSURE RANGE of this compressor unit is from 40 to 150 lb., so that it can handle such jobs as power greasing, paint spraying, tire inflating and operation of air-powered tools. An adjustable, automatic switch shuts off the unit when the 12-gal. storage tank reaches the pre-set pressure, starts the motor again when the pressure drops. For such jobs as inflating a tractor tire in the field, the tank can be filled with the unit at a power source. The unit then is disconnected from the power and hauled to the job site. The pressurized tank will remain full for hours and days. Weighing just 91 lb., the compressor unit can be moved around on its rubber-tired wheels easily, or loaded into a station wagon or truck for transfer to another job site. Made by Speedway Mfg. Co., Division of Thor Power Tool Co. △ △



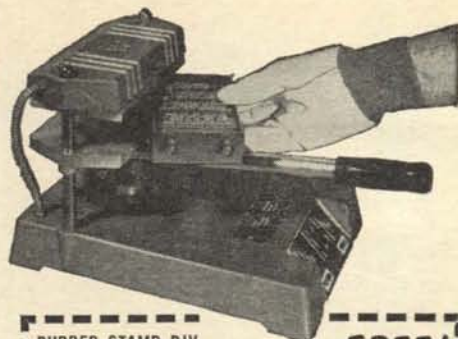
Cover is removed to show connections to motor and automatic, adjustable switch that starts and stops compressor unit.

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Novel Mfg. Corp. Dept. F-3340, 31 Second Ave., New York 3, N.Y.

One-Tool Leathercraft

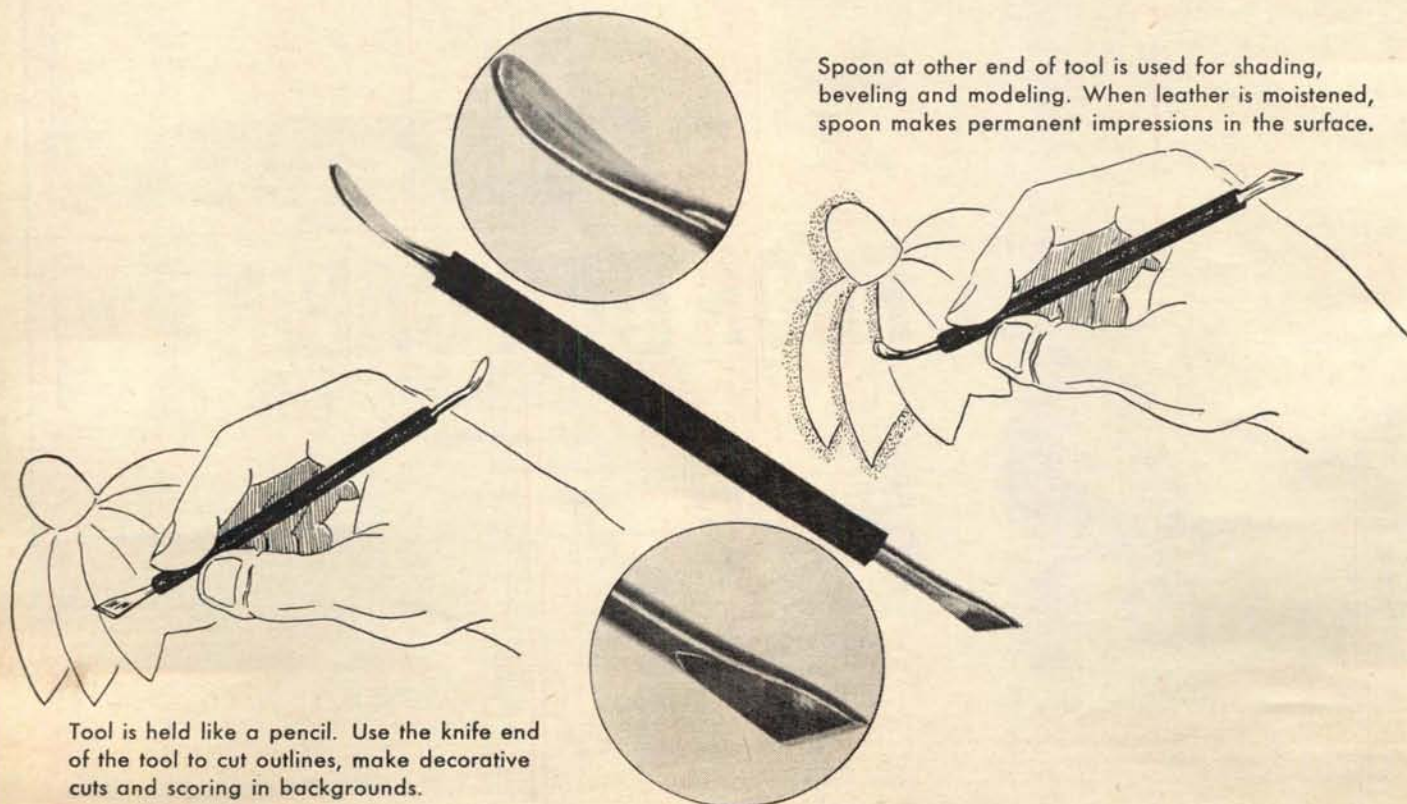


All the designs on this attractive billfold—which is available as a kit—were made with the double-end tool that is held like a pencil. It will cut, shape, bevel and shade designs on the surface of leather that has been moistened properly.

LEARN LEATHERCRAFT IN ONE EVENING, using just one tool. Recently developed, the double-end tool has a knife for cutting on one end, a spoon for beveling, shading and modeling on the other. Called the "Handy Carve" tool, the device requires no hammering, which means you can work quietly late at night in a small apartment, even in a hospital when that is necessary. The designs shown on the billfold, which is available as a kit, were made with the tool.

First step is to dampen the surface of the leather, then trace the pattern of the design onto it. Outlines of the design are cut with the knife end, beveling and shading are done with the spoon end. Decorative cuts are made last, freehand, with the knife. When leather is thoroughly dry a coating is applied, then the item—a billfold in this case—is assembled.

Two kinds of stitching are shown, enough lacing for either kind being



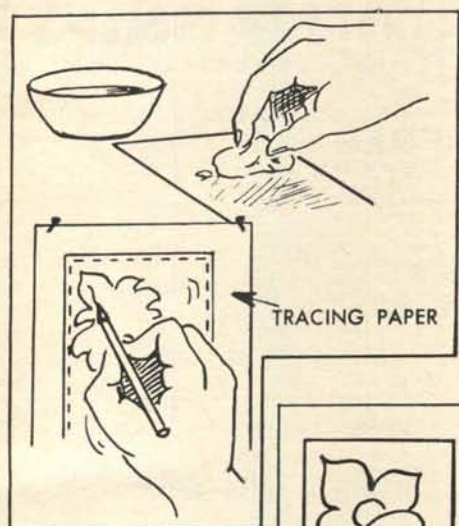
Spoon at other end of tool is used for shading, beveling and modeling. When leather is moistened, spoon makes permanent impressions in the surface.

Tool is held like a pencil. Use the knife end of the tool to cut outlines, make decorative cuts and scoring in backgrounds.

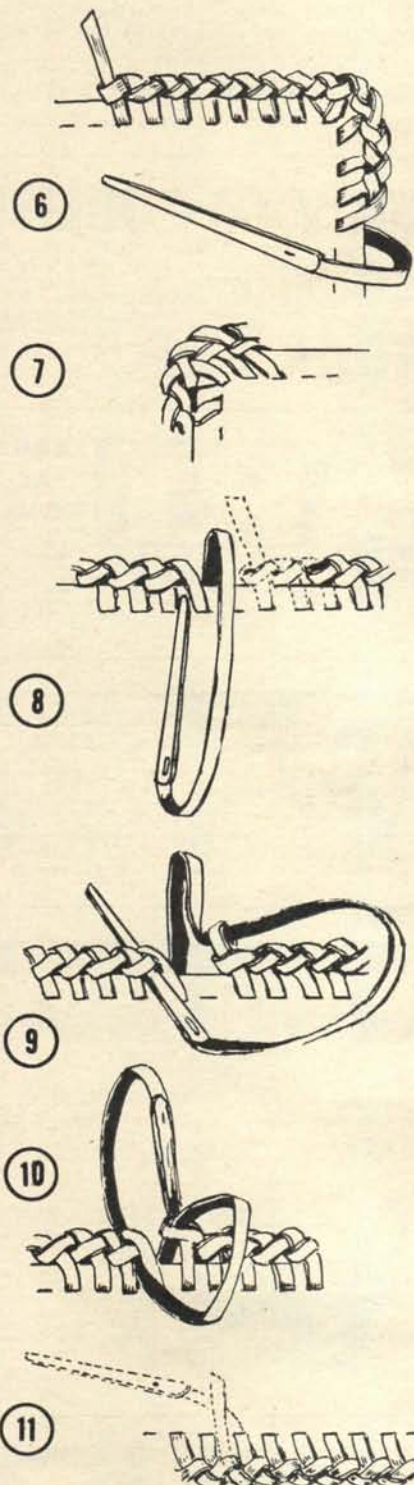
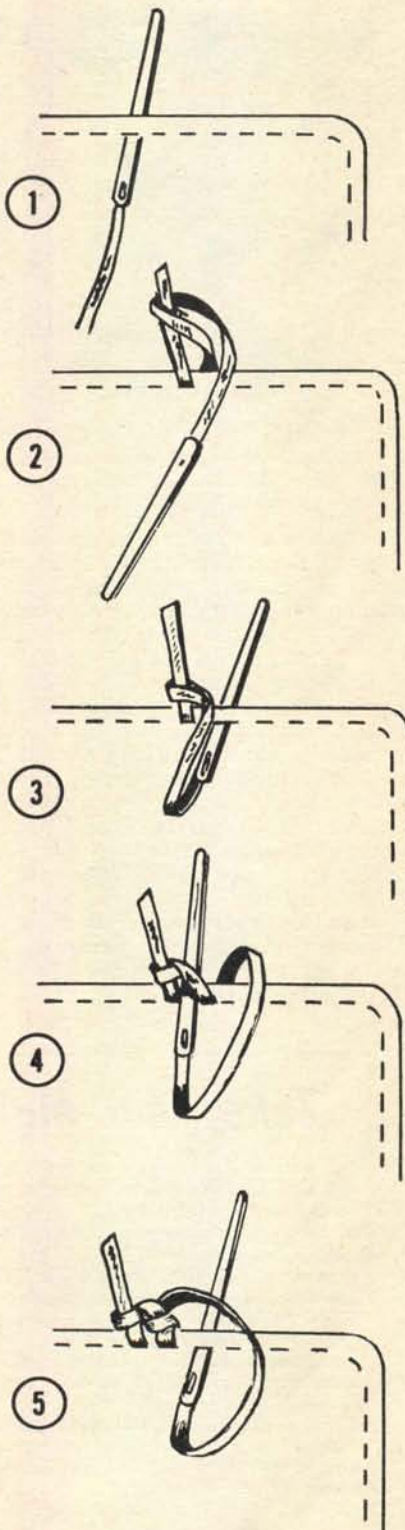
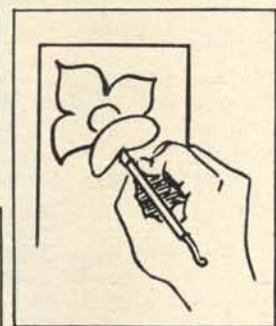
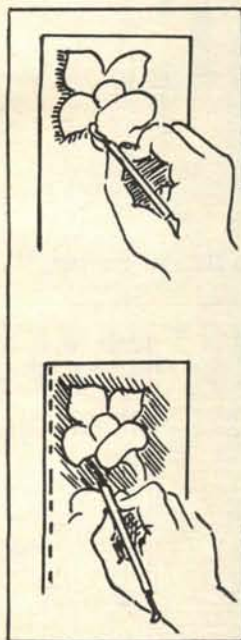
included in the billfold kit. The whip stitch is a fairly common type, and is quite simple. The Western double-loop stitch is more intricate, but also is the more attractive of the two. Complete instructions are provided

with the billfold kit, which is an ideal item for your first leathercraft project, but the illustrations on these pages will give you a pretty fair idea of the way leather can be worked with the double-end tool. These in-

structions hold true whether the item is a billfold, or a saddle. For more information write to Tandy Leather Co., Dept. 84-B, P. O. Box 791, Fort Worth 1, Texas. The billfold kit is \$2.95 ppd. From that address. $\Delta \Delta$



TRACING PAPER



Left hand column shows step-by-step how leather is moistened, pattern is traced onto surface and design then is tooled with double end tool. Two righthand columns show how to lace western double-loop stitch. Design being tooled on the leather is for billfold kit—finished product is shown in photo—but operations with double-end tool are the same for any leathercraft project. The same thing is true of the lacing. When lacing is finished it is hammered flat with a mallet.

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Inspirational Woodworking



A FULL-TIME TEACHING JOB leaves little spare time, but Sister M. Corda O.S.B. finds that creating items from warm, natural wood is a fascinating hobby. A few of the projects she has made have been sold, most have been given to friends as gifts. When she started, she had only a jig saw and other hand tools. Now there is an electric jig saw, and electric sander and drill. She has experimented, using light and dark woods for contrast, lately has combined copper wire and wood for unusual effects. The Sister is more proof that creating with your hands can be a soul-satisfying, tension-relieving hobby.

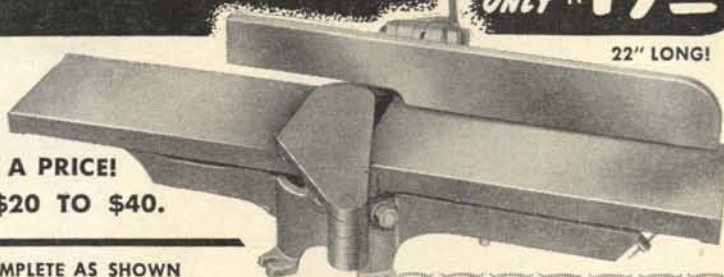
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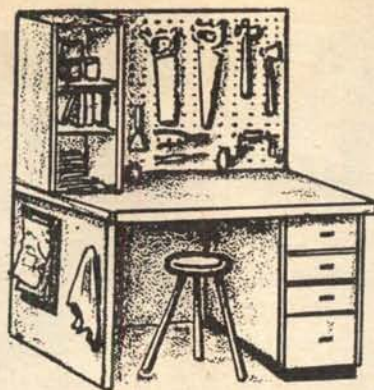
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WORKBENCH

RESEARCH DEPARTMENT

Each issue in this column we will choose questions on home and shop subjects from letters sent to us. Only those questions which have wide ap-

peal will be answered here. Questions on specialized subjects will be answered by individual letter from the Research Editor's desk.



Research Dept.:

My home has a concrete slab floor throughout — no basement. The concrete has never been covered since the house was built about three years ago. It is in good condition all over the surface in the several rooms and is dry the year 'round. I'd like to put down either a tile floor covering or a hardwood floor over the concrete. I'm undecided which type of floor to lay, tile or hardwood. I favor hardwood but I don't know how it should be laid over the concrete. I do know it is done, but don't know if it is advisable in the type of house I have. There are five rooms and I'd like hardwood floors in the living room and the bedrooms, but would settle for tile floor covering in all the rooms if you think best. What is your recommendation?—W.T., N. Y.

Dear Mr. W. T.:

Nowadays you have a wide choice of floor coverings in various types of materials. If you are certain that the floor is dry, has always been dry and is likely to remain so indefinitely, then you can more or less take your choice, in both color and type of material. Asphalt tile generally is recommended for laying over concrete, both above and below grade. If, as you say, your floor is al-

ways dry, then it might be permissible to consider other types of tile. But we would think it advisable to consider only asphalt tile for your purpose. It withstands the pressure of heavy pieces of furniture on legs or casters, such as sofas, chest of drawers, double beds and pianos, also stoves and refrigerators. Then there are ceramic tiles in a variety of selections in design and color. Ceramic tiles are probably the most durable of all the types of floor tiles, but decoratively in pattern and texture are somewhat more limited than other types and also are more expensive in initial cost. Considering all these factors we think you would be well satisfied and pleased with the result if you choose asphalt or ceramic tile in all the rooms, or hardwood floors in all rooms except perhaps the kitchen and bath, and possibly the utility room, these three being floored with tile. In recommending a hardwood floor in the living room and bedrooms, we are thinking of the new parquet type hardwood flooring which comes in squares and is laid with a floor-tile cement in much the same fashion as regular floor tiles. The squares come prefinished and when laid according to the manufacturer's instructions you get a very beautiful and durable floor at a minimum of labor. This is the reason we recommend that you consider the prefinished hardwood parquet squares rather than conventional hardwood flooring boards or ranch boards, which must be nailed to screeds set in hot asphalt. Using the prefinished hardwood squares you can do the job yourself, a room at a time, without having to move out the entire household furnishings while a conventional hardwood floor is laid and finished. And, on a slab floor you do not have the problem of the offsets at those points where the conventional hardwood floor, laid over screeds, meets the tile floor, as at the bathroom and kitchen doorways. One caution: When laying any type of floor tile be sure—and we repeat because of its importance to success, be sure—to follow the flooring manufacturer's instructions in all details.

Dear Research Editor:

I have several pieces of driftwood of rather attractive shapes that I'd like to know how to clean and finish. One of these is quite large and is so shaped that it could be used as a base for a cocktail table. Two pieces could be made to serve as candlesticks, or stands, and several would make novel lamp bases. The stuff is rough, full of dirt and sand, but all the pieces seem to be sound and the wood is hard as stone. My wife tells me to cut it up for fireplace wood, but we have plenty of that in this locality and I'd like to show her what can be done with it. Can you give me full instructions on how to proceed?—G.S., Me.



Dear Mr. G. S.:

You've laid yourself out a real chore. There are so many ways of finishing driftwood that we can give you only a few general instructions. It is impossible to outline a complete procedure in the space we have available. We can't tell you how to cut, shape and otherwise prepare the piece you say is suitable for a cocktail-table base; neither can we say how to cut and otherwise prepare the pieces for candlestands and lamp bases. That you will have to decide for yourself. We assume from your description of the condition of the pieces that they have been picked up along an ocean beach or along the shore of a lake and that they have not been cleaned, cut or otherwise altered from the natural form. If this conclusion is correct then the first step is a thorough cleaning to remove sand, dirt and loose particles. Use of a stiff-bristle scrubbing brush and a wire brush will get rid of most of the sand and imbedded dirt and anything that's loose. This step must be thorough and usually it takes a vigorous application of the brushes and even a light scrubbing with a mild soap solution to get down to bare wood. Use soap and water sparingly and be careful not to get the wood soaked, as this may discolor it somewhat. Once you get back to bare wood what you do depends on what type of finish you have in mind. If you want to darken the wood and highlight it with gold paint or some other color, that's one thing. If you have in mind preserv-

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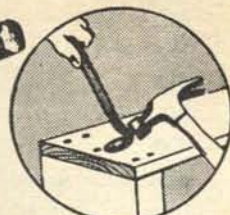


FIG. #277

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ing the natural gray tones, that's something else. In either case, however, the next step is to sand all the high spots lightly with a medium to fine grade sandpaper. In this step you have to judge solely by the altered appearance of the wood how far to go. Go a bit too far and you will cut through the weathered gray. Not far enough and the surface will still be rough. On some of the surfaces you will find fine steel wool better than any sandpaper, so have a few rolls of it handy. All the high surfaces, ribs and whatnot, should be worked down smooth, but use care not to cut through the weathered gray, or patina of age, as it were. Some finishers of driftwood use an ordinary shingle stain to get the tonal color they want. Penetrating wood stains also can be used, but they are more difficult to control in effect and depth of color. Some also use a pigmented toner applied with a spray gun to obtain varying depths of color. When darker stains are used the work is often coated with a flat varnish and then highlighted in gold, or gilt. There is now available a paint consisting of a special liquid vehicle with extra fine particles of genuine gold in suspension. This gives almost, but not quite, the effect of goldleafing. The product is, of course, relatively expensive, but it is effective and durable.



Dear Research Editor:

I have a concrete porch with an iron railing which was built several years ago. Last spring as I was painting the siding of the house, I painted the sides and risers of the steps in the same color, using the oil paint I was using on the siding. This was good paint, the best house paint I could buy. But within a few months it began to peel in spots on both sides of the porch and on the step risers. Now it's a mess, largely because it's only peeling in separated small areas. Other places it seems to be as tightly stuck to the cement as it is to the wood siding. Come spring and painting time again, what then? Do I remove the rest of the paint and do the job over, or what?—E.W., Kan.

Dear Mr. E. W.:

Unfortunately, you did everything so very wrong that it's going to take some doing to remedy the condition now exist-

ing. Dampness plus the free alkali in the concrete probably caused the paint to peel in spots as you describe. House paint, no matter how good it is, is not suitable for masonry and more especially masonry exposed to dampness and weathering as it is in a stoop—which we have assumed you are referring to rather than a porch, which is something else. Without a firsthand look at the stoop, its location and the shrubbery that may be adjacent and which might be a factor in any remedial step, it's a guess as to what is best to do. Rather than attempt to take the paint all off with a remover, it might be worthwhile to try coating the defective spots with a masonry sealer and then go over the whole thing with an oil-base paint again. This is anything but an orthodox procedure, but it might save you some time and a lot of labor. We hesitate to recommend the step simply because at best the oil paint won't last more than a couple of seasons, and it might peel even before. It's impossible to say with any certainty. But if you wish you can try. First, scrub off all the loose paint particles and flakes with a wire brush. Then, if the concrete is smooth, sand the bare spots so that you produce a featheredge. Then apply a prepared masonry sealer (available from your paint dealer or building materials dealer) to the bare spots. Apply only when you're sure the concrete is dry, or as dry as it will ever get in this particular location. Allow to dry thoroughly, then follow with the finishing coats of paint. It may stay on, for a while, but eventually you will have to remove the oil paint with a remover (use a wash-type remover, the kind that can be washed off the surface with clear water) and apply a masonry sealer to all those parts not previously coated as well as those spots that were coated, and then follow with a masonry paint which is especially prepared for the purpose.



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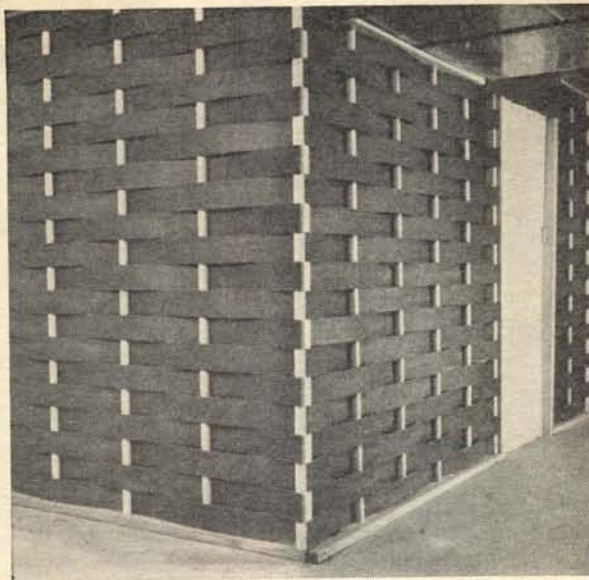
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2. Combination of white wood of the closet poles and dark finish of hardboard strips makes further finishing unnecessary, unless you want to paint to match other walls.

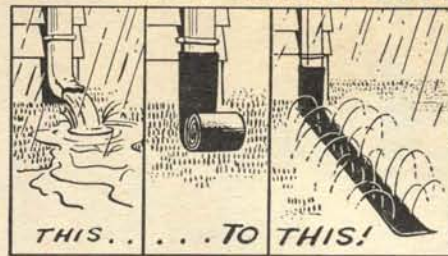
ONE OF THE FIRST STEPS in remodeling a basement is to build a partition to conceal the furnace, hot-water tank and laundry tubs. At the same time, however, the tank and heating plant require adequate ventilation to assure proper combustion. Mr. Tom Young of Independence, Mo., solved this problem in a clever way, with a partition that not only solved both problems, but is extremely attractive, yet simple to build. Mr. Young first placed lengths of 2 x 4 on the floor to outline the area to be enclosed. In these 2 x 4s he drilled 1½-in. holes, spaced 16 in. on center. Lengths of 1 x 4 then were drilled in the same manner, aligned to match the 2 x 4s on the floor, and nailed to the joists overhead. Lengths of 1½-in.-dia. closet poles then were fitted

between the ceiling and floor members. The upper ends of the poles were slipped through the 1 x 4s, Fig. 2, then the lower ends dropped into the holes in the 2 x 4s. Next, with Mrs. Young's help, Tom ripped several 4 x 12-ft. sheets of hardboard (½-in. Duolux, tempered Masonite, smooth both sides) into 4-in. strips. These strips were woven horizontally between the vertical poles, Figs. 1, 2 and 3. The ends of the strips were trimmed flush with the 2 x 2 that was used for the corner post, Fig. 1. To gain access to the space, a 1 x 4 frame was made to accommodate an accordion-fold door, Fig. 1. No nails were used in assembling the partition, except for attaching the 1 x 4 strips to the joists, and holding the 2 x 4 base plates at the corner. △ △



3. Edge of furnace is just visible at right. This view shows the generous storage available for yard furniture, fans not being used and other odds and ends requiring space.

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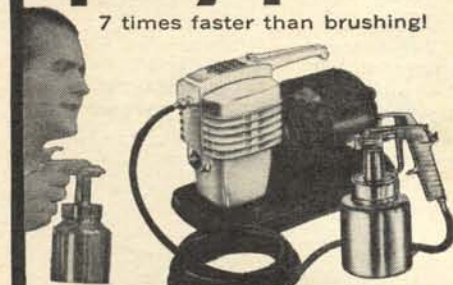
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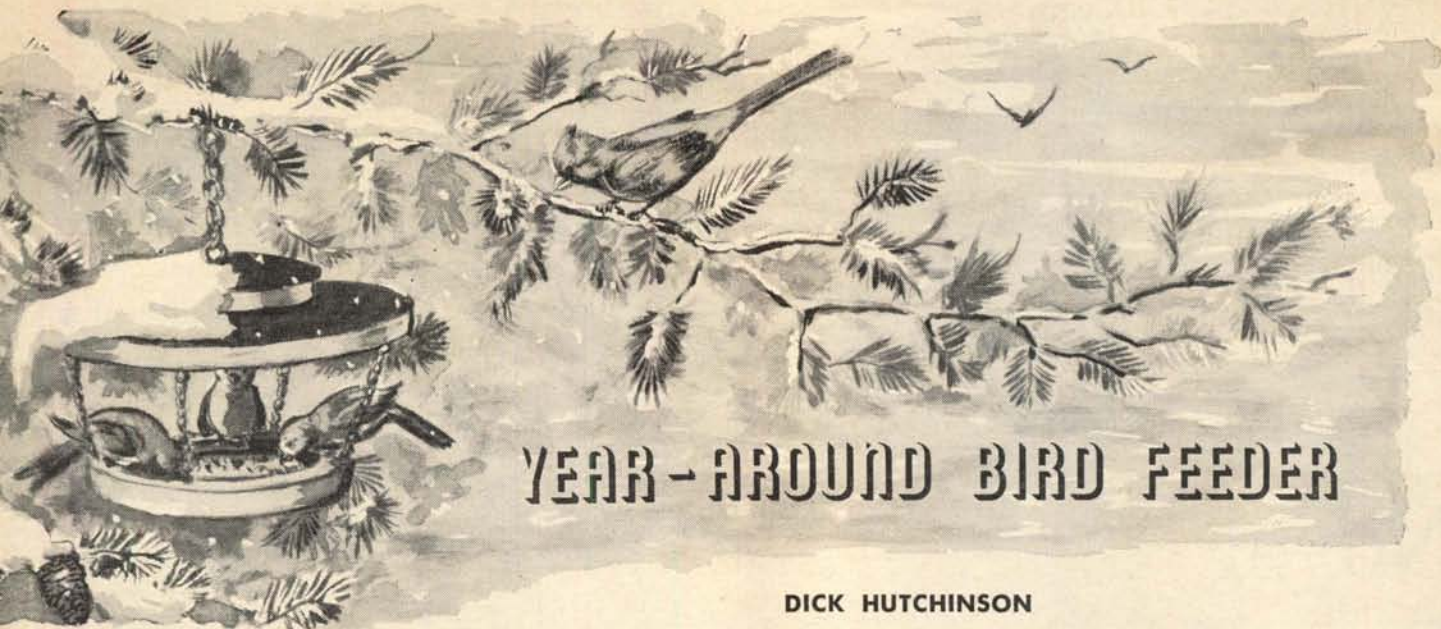
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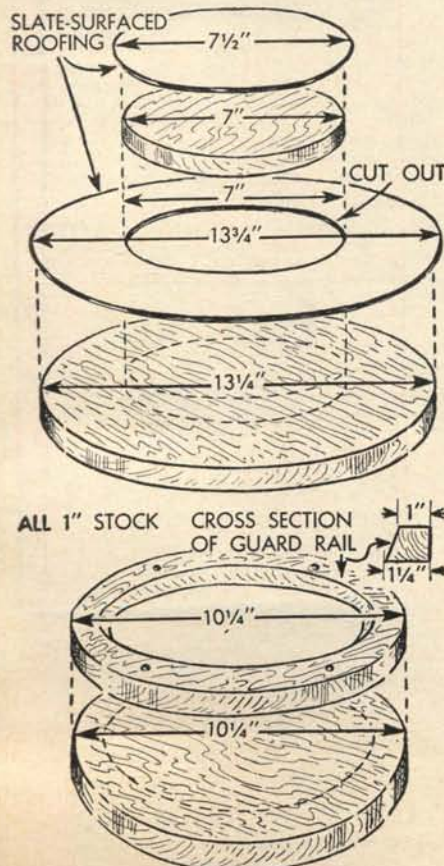
DICK HUTCHINSON

FREE-SWINGING ON A CHAIN, this feeder will attract birds by its natural swaying with the wind, and the design is attractive enough to look well in any yard or garden. If the feeder is supplied with food all year around, rather than just during the winter, you will have birds in your yard at all seasons, even summer.

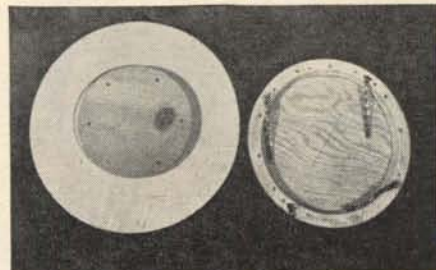
Construction consists of two disks for the roof, cut from 1-in. lumber. Slate-surfaced asphalt roofing material is nailed to both roof levels. You may prefer to nail a solid piece of roofing to the lower disk, rather

than cutting a hole as indicated for the original. Both the floor disk and guard rail are cut from 1-in. stock and glued and nailed together. To prevent splitting the rail, drill clearance holes through it for the nails. Four screw eyes in the underside of the roof, and in the top of the guard rail, permit attaching roof and floor with four 4-in. lengths of small brass chain. Another 4 to 6-in. length of chain is fastened to a screw eye in the center of the roof top to permit hanging the feeder from a tree limb

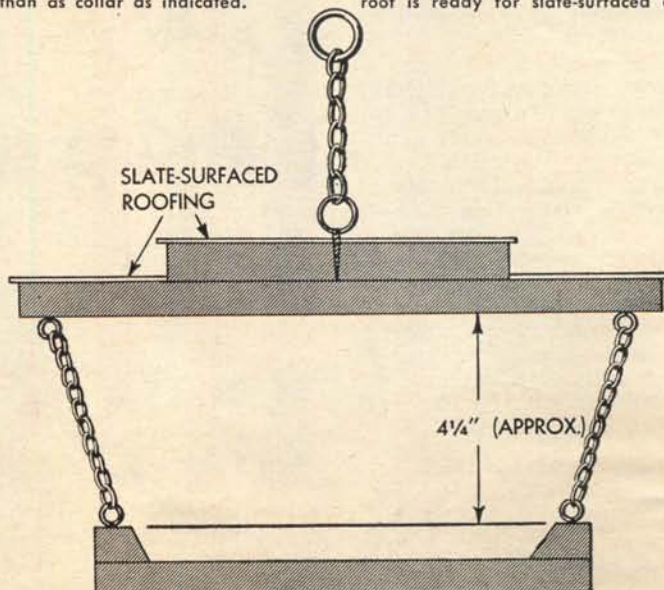
up out of the way of cats. An even better setup is to fasten a pulley to a tree limb, then attach the feeder to a length of rope that is passed over the pulley. The lower end of the rope is fastened to a lower limb or bracket. The feeder then can be lowered for filling, readily pulled up again. Paint the completed feeder with two coats of house paint. The color should contrast or blend with the roofing material. If the material matches the roofing on your house, paint the feeder the color of your home. $\Delta \Delta$



Roof disks are glued and nailed together. Roofing material can be nailed on lower disk as one piece, rather than as collar as indicated.



Guard rail is nailed and glued to floor disk, screw eyes are driven and chains are attached, roof is ready for slate-surfaced asphalt.



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Book Reviews

ELECTRONIC TIPS AND TIMESAVERS
by John Comstock
96 pages, \$1.50
Howard W. Sams and Co., Inc.,
1720 East 38th St.
Indianapolis 6, Ind.

Over 300 time and moneysaving tips for the electronic technician, builder, experimenter and hobbyist are in this book. Hints cover bench and field servicing, shop and truck equipment, soldering, tools, test equipment and construction and experimentation. A book you will keep handy at the bench.

PROFESSIONAL TV REPAIR SECRETS
by Art Margolis. \$2.50
Arco Publishing Co., Inc.,
480 Lexington Ave., N. Y. 17

Written by a man who has had years in the TV repair business, this well-illustrated book brings television repair into the do-it-yourself field along with other home repair and maintenance projects. Clearly explained are the functions of the various circuits and tubes in a set, and how to repair the 80 per cent of problems that require only tube replacement or simple adjustment to correct. Also described are those less-common malfunctions that definitely are beyond the scope of home repair.

WOODWORKING WITH MACHINES
By J. H. Douglass
\$4.20, McKnight & McKnight
109-111 W. Market St.
Publishing Co., Bloomington, Ill.

Although designed primarily as a textbook for high school and adult courses in woodworking, this book has a lot of good information for any home craftsman. There are 337 illustrations showing the proper uses of power tools, and 16 common hardwoods are shown in natural color, plain and quarter-sawn and edge grain. Designing furniture, planning projects, applying finishes; all are covered thoroughly. Included are tests that could be used to make the book a home-study course.

IDEAS FOR REMODELING YOUR HOME
Lane Publishing Co.,
Menlo Park, Calif., \$1.95.

HOW TO plan and finance your remodeling, adding rooms, enclosing carports, skylighting, improving acoustics and rewiring are some of the subjects covered in this book. Ideas galore for the home craftsman who wants to improve his home.

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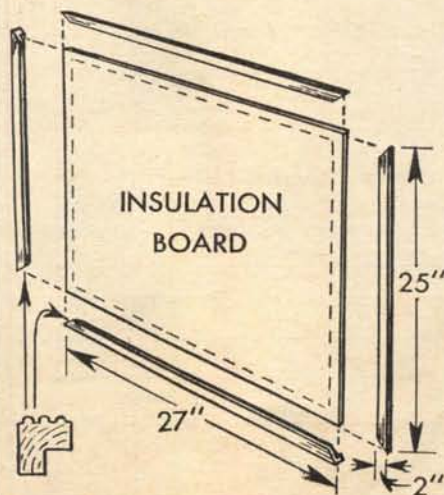
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Family Bulletin Board



MISCELLANEOUS MESSAGES that effect family life range all the way from invitations to parties, P.T.A. announcements, prescriptions, grocery lists, to simple notes telling Dad and Mother where Sis and Brother can be reached when it's supper time. A family bulletin board is the ideal spot for all these messages, located in the kitchen near a telephone. A glance at the board on the way in or out of the house lets each member of the family know if there is a message for him or her. If a missing member of the family receives a phone call, a note with the message can be tacked to the board.

All that is required for making the board is a piece of insulating wallboard and a strip of molding or picture framing. The framing can be purchased, or run off on a shaper or router if you have one in your shop. Rabbit the back surface of the framing to accept the thickness of the wallboard, then assemble it with mitered corners as indicated. The dimensions given are the size of the original. Experience has shown that the bulletin board should be as large as is practical, because it will fill up in a hurry. Δ Δ



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YOU'RE IN BUSINESS RIGHT OFF—Course, complete upholsterer's tools, materials frames, all you need to earn in sparetime while you learn AT HOME, Expert N. Y. State-approved training in Custom Furniture Upholstery, slip covers, etc. Big Opportunity Field. Send for FREE illustrated Catalog, FREE Sample Lesson. Write today.

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Why continue to suffer without attempting to do something? Write today for New Booklet—"THE LIEPE METHODS FOR HOME USE." It tells about Varicose Ulcers and Open Leg Sores. Liepe Methods used while you walk. More than 60 years of success. Praised and endorsed by multitudes.

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MAKE MONEY AT HOME
Repair burns, tears, moth holes in Suits, Dresses... Like New. All instructions sent on no risk trial. Skill-Weave's invisible patch method of repair is quickly learned at home—a short cut to earnings. Spare or Full Time. Send name and address on postcard today for FREE details.
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Make your own castings of aluminum, copper, bronze, silver; case harden steel; develop new alloys. Foundry sets available in 4 sizes including 2400 Deg. F. Blast Furnace, and full instructions. Write for Free Circular.
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After a long and costly search, reprints of the original 1870 revised editions of the famous McGuffey's Readers have been completed and you can now purchase exact copies at the following low prices POSTPAID:

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OLD AUTHORS, Dept. WH-11, Rowan, Iowa

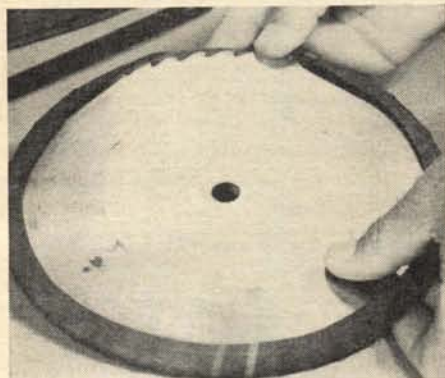
Help Asthmatic Children

National Foundation for Asthmatic Children
NATIONAL HEADQUARTERS • TUCSON, ARIZ.



WORKBENCH SHOP TIPS

Protecting Sharp Saw Blades



Keep that freshly-sharpened saw blade in good shape even when stored in a drawer or toolbox full of tools by "wrapping" it with a rubber band cut from an old inner tube. Use as big a tube as is available, so the rubber band will not be so tight as to allow the saw teeth to cut through it easily.

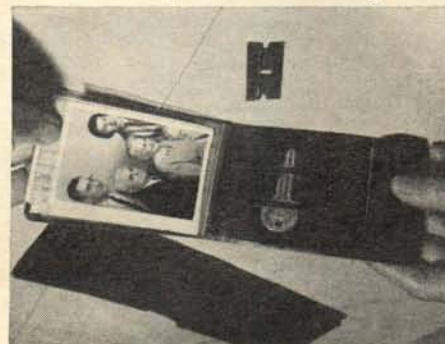
Bil Toman, Palatine, Ill.

Slip-Proof Glue Joint

When a freshly-glued joint between wooden members slips under clamp pressure, drop a few grains of sand in the glue. The sharp grains will be forced into the wood and prevent any further slipping.

Edward Bentley, Jackson, Mich.

For A Spare Auto Key



When you lock yourself out of your car, simply pull your billfold from your pocket to get that extra key. The key can be riveted to a flap in the billfold, or fitted in slits cut with a razor blade, as indicated.

Wayne Floyd, Fayetteville, Tenn.

Magnet Sets Glazier Points

You can set glazier points into the sash very quickly and without the usual fumbling and dropping, if you follow this suggestion. Cut a hacksaw slot into the end of a bar magnet. Fit the points into the groove, and the magnet will hold them in the exact position you desire, preventing them from dropping or slipping. Then by a gentle pressure on the magnet you can set your points into the wood in perfect alignment and without difficulty.

M. Robert Beasley, Jackson, Mich.

Saw Blades Kept Handy



No need to search for the blades for your electric jig saw when they are kept in a holder attached to the power cord. Punch a hole in the plastic container in which the blades are packed, thread a piece of string through the hole and tie the package on the cord as shown.

Donald Spichuk, Brooklyn, N. Y.

Hanging Christmas Stockings

DON'T MAR THE MANTEL when hanging Christmas stockings. Cup hooks screwed to the underside of the mantel will not show, and ribbon and loops can be sewed to stockings for hanging. Small C-clamps, painted to match woodwork or decorations also can be used to hang stockings. If there are a number of stockings, hang their loops over a straight curtain rod, held to the mantel with painted C-clamps.

Anna Lou Shanor, St. Petersburg, Fla.

Smoother - Faster Finer FINISH SANDING in the home workshop



Flexan 5 inch ROTARY
SURFACE SANDER
ONLY \$2.98 COMPLETE

- For use with any 1/4" electric drill; "rotary action sands faster"
- Smooth . . . beautiful finishes
- Rubber universal joint prevents gouging or marring of surfaces
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easy to follow "exploded"
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Includes Buffet Base and Top,
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pair play-
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mental iron work, etc.
Solder, heat, bend and straighten with terrific heat
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minded home owners, relatives, friends. Available only
from: MIDWAY WELDER, Dept. DW-12, Kearney, Nebr.

HARGRAVE CLAMPS

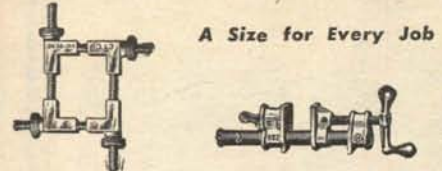
A Complete Line of Tested Tools



A Clamp for Every Purpose



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SHOWING HARGRAVE CLAMPS, CHISELS, PUNCHES, MASONRY DRILLS, GASKET CUTTERS, ETC.

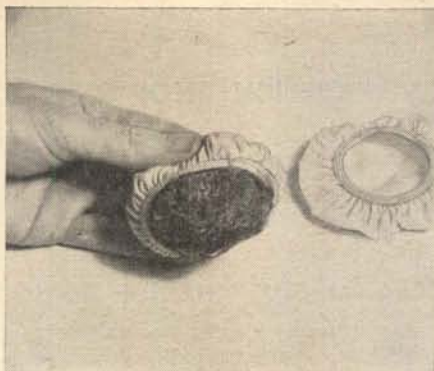
THE CINCINNATI TOOL CO.

4379 Montgomery Rd.

Cincinnati 12, Ohio

WORKBENCH SHOP TIPS

Steel-Wool Holder



Avoid getting splinters of steel wool in your fingers when using the material around the shop by fitting it inside a plastic bowl cover as shown. If your wife objects to you using those from the kitchen, pick up a selection at your hardware store.

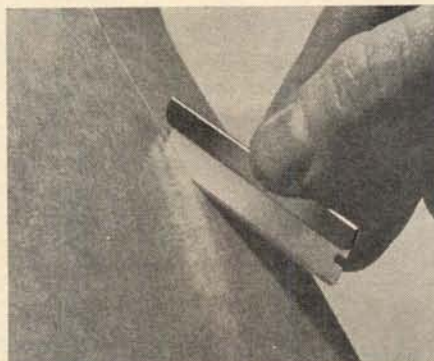
John A. Comstock, Wellsboro, Pa.

Thawing Car-Door Locks

If your car-door lock becomes frozen, heat the key with a match or cigarette lighter, then insert it in the lock. As a frozen lock usually indicates water in the lock cylinder, correct this condition by squirting lighter fluid into the keyhole and use the key to turn the tumblers so the fluid works into them. When the fluid has dried, lubricate the lock with powdered graphite.

Edward Bentley, Jackson, Mich.

Extra-Long Razor Blade

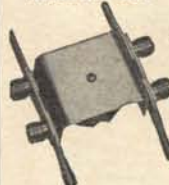


While ordinary razor blades are used for a variety of cutting jobs around the shop and home, there is another type blade that will do a better job, but which is not as readily available. This blade is used in beauty shops, and is longer and narrower than ordinary blades, thus providing more cutting edge. If you know someone who works in a beauty shop, ask them to save you the discarded blades.

Wayne Floyd, Fayetteville, Tenn.

JOINTER AND PLANER BLADE—SETTING

MAGNA-SET



U.S. Pat. No. 2,589,865

a saving on material spoilage and excessive and improper blade wear!

Send Post Card for information to:

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By employing the use of magnetism, the gage pictured in this ad is now saving the time and tempers of woodworkers in industry, Home Workshops and Vocational Schools throughout the U.S.A.

NOTE THESE ADVANTAGES

An expert mechanic is not required for setting blades. With Magna-Set, anyone can do it!

The necessity of tapping, prying and re-adjusting is entirely eliminated!

Use of Magna-Set constitutes a saving on material spoilage and excessive and improper blade wear!



— AT LAST —

The perfect tool for cutting circles and fancy shapes. — Sheet metal shears that do the job neatly and easily. Will cut steel up to 18 gauge, also brass, aluminum, plastic, etc. Wire cutting jaws cut 1/8" wire clean. In attractive sturdy plastic case. \$4.45 postpaid — tax included.

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X.L., Rubber, Plg. \$2.50; Qtr. \$3 (postage extra). Molds and enough rubber for 3 molds, \$1.50 prepaid. U. S. only. Send 25c (refunded with order) for 40-page catalog describing this profit-making business!

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Make new greaseless donuts in kitchen. No smoke. Sell Stores. Half Profit. Cash Daily. No exp. nec. FREE RECIPES. No obligation.

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with Depth-Bevel-
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CUTS 2x4's

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Guaranteed to fit ANY 1/4" Electric Drill in
One-Minute with NEW SAFETY-BRACKET

You save plenty on this new low priced portable saw attachment! Ideal for building anything from bookcase to a bungalow. Whizzes thru 2x4's in one cut with 5" Combination Blade, Graduated Depth and Bevel Gages adjust for cuts to 1 1/2" in depth, bevels to 45°. Has adjustable Rip Gage & Visual Guide to follow cutting line. Can be used with one hand. Strong steel gear drive and self-lubricating lifetime bearings assure long trouble-free use. No. 457.....

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"ARCO JIG-SAW"
CUTS ANY SHAPE, ANY MATERIAL!

Guaranteed to fit ANY 1/4" Electric Drill in 1-Minute with NEW SAFETY-BRACKET

Here's a great buy! Famous "Arco Jig-Saw," made by the leading Mfr. of drill attachments, is now available at a new low price! Does 95% of the sawing jobs about the house or workshop. Cuts any pattern in woods, plastics, metals—even cuts 2x4's! Has all the speed and capacity of \$55 jig saws. 1-Yr. Factory Guarantee. 6 Extra Assorted Jig-Saw Blades for cutting woods, plastics, metals.....

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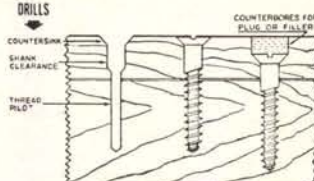
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FOR EVERY WOODSCREW
Drills Hole, Countersinks,
Counterbores in 1 Operation

Adjusts for ANY Screw Length

Set of 4 drills for all #6-8-10-12 wood screws—flat, round, oval heads. Use with hand or elec. drills, drill press on woods, plastics, aluminum. 4-Pc. Set

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Every Electric Drill a POWER SCREW DRIVER

EXCLUSIVE! Drives biggest screws perfectly every-time with powerful non-slip Industrial-type Clutch. Clutch disengages automatically when screw is driven home. Special Bit Holder prevents bit from slipping off screwhead to damage work or hurt operator's hand. No attachment under \$10 has these 2 important features! Including Phillips Bit and 1/4" Bit for slotted screws. 1-Year Factory Guarantee.....

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NOW AVAILABLE with REGULAR or
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NEW HEAVY-DUTY
DESIGN
PERMITS CUTTING
STEEL & ALL
OTHER METALS,
WOOD, PLASTICS,
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Fits any Electric Drill, Lathe, Drill-Press or Motor. "Slug-Ejector" pops out discs immediately—therefore works 3-times faster than other makes! 7 highest quality Metal Cutting Blades easily exchanged to cut 1", 1 1/4", 1 1/2", 1 3/4", 2", 2 1/4" & 2 3/4" holes thru 3/4" stock. Including 1/4" drill bit. No. 650.....

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No. 652—as above but with 2 1/4" Extra Long Blades to cut thru any 2" stock. Including 3/4" drill bit with 1/4" shank.....

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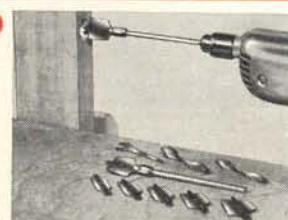
SAWS • DRILLS • ROUTS • FILES

Fits any Electric Drill. Cuts own starting hole and any shape in any direction tool is moved. Cuts plywood, lumber, formica, non-ferrous metals, thin sheet steel. Sharp milled cutting edges for long life.....

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"ARCO BORE-BIT SET"

Ideal for
deep hole
drilling,
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For any Electric Drill, Drill Press. Drills holes up to 5 3/4" deep. 8 different Bits drill 3/8", 1/2", 5/8", 3/4", 1", 1 1/4", 1 1/2", 1 3/4" diameter holes in woods, panel boards, plaster, plastic. Consists of 10-piece set with Shank & Wrench. Quality made of tough hardened tool steel to cut cleaner, faster and last longer.....

\$295

"ARCO DOWEL CENTERS"

MATCH DOWEL
HOLES—
Fast, Accurate



Set of 8 Dowel Centers, 2 each: 1/2", 3/4", 5/16", 1/4". Holes are drilled in 1 of 2 pieces of wood to be joined and correct size Centers inserted. Other piece of wood is pressed against Centers & tapped. Resulting punch marks are exact centers for drilling opposite dowel holes. Set of 8.....

98c



"ARCO DADO-SET"

6" Set Cuts Grooves to 3/4" Wide.

For use on circular bench, floor or radial saws. Includes 2 outside Blades & 7 Chippers 1/16" thick. 3/4" bore with 1/2" reducing bushings. Made of tough heavy gauge steel to cut faster and last longer.

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"ARCO" Tools are available at your dealer or order direct on our 20-day Money Back Guarantee.

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Please ship under your 20-day Money Back Guarantee:

- ☐ "ARCO SAW" No. 457.....\$10.95
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- ☐ "ARCO DRILL-SHOP" No. 410.....4.50
- ☐ "ARCO 2-Speed ANGLE-BUFFER" No. 333.....6.50

☐ I enclose Check, M.O.—ship postpaid.
☐ Ship COD (no orders under \$6)—plus postage.

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"ARCO DRILL-SHOP"

A complete Kit for Polishing,
Grinding, Wire Brushing.



Converts any 1/4" Electric Drill into a handy bench tool. Sturdy 1-piece cast Drill Stand mounts on any flat surface while Clamp holds drill vibration-free. Complete with 1/2" Wheel Arbor (with 1/4" shank), 4" Buffering Wheel, 3" Wire Brush, 3" Grinding Wheel & Polishing Compound. **\$450**

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"ARCO 2-Speed ANGLE-BUFFER"

The Perfect Tool for BUFFING & SANDING
Bufs at 1/2 Drill Speed, Sands at Double Drill Speed

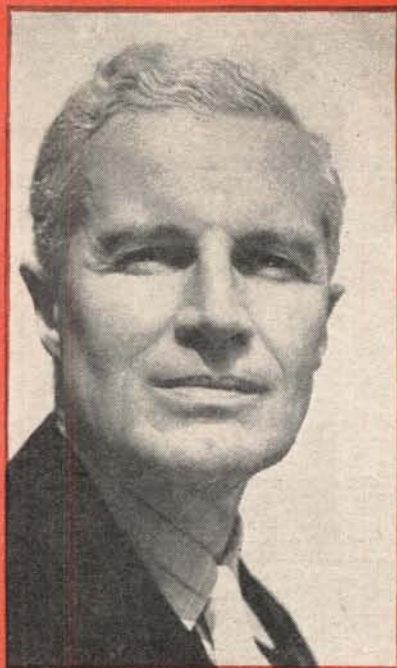
Outperforms other makes selling for over \$9.00!
FITS ANY ELEC. DRILL

• BUFFS at 1/2 drill speed to prevent burning when polishing furniture, autos, etc.

• SANDS at double drill speed for smooth finishing.

• ANGLE-DRIVE permits use at any angle on all surfaces. Includes Rubber Head, 5 1/2" Lambswool Polisher, 6 Sanding Discs and Instructions.... **\$650**





I'd like to give this to my fellow men... while I am still able to help!

I was young once, as you may be—today I am older. Not too old to enjoy the fruits of my work, but older in the sense of being wiser. And once I was poor, desperately poor. Today almost any man can stretch his income to make ends meet. Today, there are few who hunger for bread and shelter. But in my youth I knew the pinch of poverty; the emptiness of hunger; the cold stare of the creditor who would not take excuses for money. Today, all that is past. And behind my city house, my

summer home, my Cadillacs, my Winter-long vacations and my sense of independence—behind all the wealth of cash and deep inner satisfaction that I enjoy—there is one simple secret. It is this secret that I would like to impart to you. If you are satisfied with a humdrum life of service to another master, turn this page now—read no more. If you are interested in a fuller life, free from bosses, free from worries, free from fears, read further. This message may be meant for you.

By Victor B. Mason

I am printing my message in a magazine. It may come to the attention of thousands of eyes. But of all those thousands, only a few will have the vision to understand. Many may read; but of a thousand only you may have the intuition, the sensitivity, to understand that what I am writing may be intended for you—may be the tide that shapes your destiny, which, taken at the crest, carries you to levels of independence beyond the dreams of avarice.

Don't misunderstand me. There is no mysticism in this. I am not speaking of occult things; of innumerable laws of nature that will sweep you to success without effort on your part. That sort of talk is *rubbish*! And anyone who tries to tell you that you can *think* your way to riches without effort is a false friend. I am too much of a realist for that. And I hope you are.

I hope you are the kind of man—if you have read this far—who knows that anything worthwhile has to be *earned*! I hope you have learned that there is no reward without effort. If you have learned this, then you may be ready to take the next step in the development of your karma—you may be ready to learn and use the secret I have to impart.

I Have All The Money I Need

In my own life I have gone beyond the need of money. I have it. I have gone beyond the need of gain. I have two businesses that pay me an income well above any amount I have need for. And, in addition, I have the satisfaction—the deep satisfaction—of knowing that I have put more than three hundred other men in businesses of their own. Since I have no need for money, the greatest satisfaction I get from life, is sharing my secret of personal independence with others—seeing them achieve the same heights of happiness that have come into my own life.

Please don't misunderstand this statement. I am not a philanthropist. I believe that charity is something that no proud man will accept. I have never seen a man who was worth his salt who would accept

something for nothing. I have never met a highly successful man whom the world respected who did not sacrifice something to gain his position. And, unless you are willing to make at least half the effort, I'm not interested in giving you a "leg up" to the achievement of your goal. Frankly, I'm going to charge you something for the secret I give you. Not a lot—but enough to make me believe that you are a little above the fellows who merely "wish" for success and are not willing to sacrifice something to get it.

A Fascinating and Peculiar Business

I have a business that is peculiar—one of my businesses. The unusual thing about it is that it is needed in every little community throughout this country. But it is a business that will never be invaded by the "big fellows". It has to be handled on a local basis. No giant octopus can ever gobble up the whole thing. No big combine is ever going to destroy it. It is essentially a "one man" business that can be operated without outside help. It is a business that is good summer and winter. It is a business that is growing each year. And, it is a business that can be started on an investment so small that it is within the reach of anyone who has a television set. But it has nothing to do with television.

This business has another peculiarity. It can be started at home in spare time. No risk to present job. No risk to present income. And no need to let anyone else know you are "on your own". It can be run as a spare time business for extra money. Or, as it grows to the point where it is paying more than your present salary, it can be expanded into a full time business—overnight. It can give you a sense of personal independence that will free you forever from the fear of lay-off, loss of job, depressions, or economic reverses.

Are You Mechanically Inclined?

While the operation of this business is partly automatic, it won't run itself. If you are to use it as a stepping stone to independence, you must be able to work with your hands, use such tools as hammer and screw driver, and enjoy getting into a pair of blue jeans and rolling up your sleeves. But two hours a day of manual work will keep your "factory" running 24 hours turn-

ing out a product that has a steady and ready sale in every community. A half dollar spent for raw materials can bring you six dollars in cash—six times a day.

In this message I'm not going to try to tell you the entire story. There is not enough space on this page. And, I am not going to ask you to spend a penny now to learn the secret. I'll send you all the information, free. If you are interested in becoming independent, in becoming your own boss, in knowing the sweet fruits of success as I know them, send me your name. That's all. Just your name. I won't ask you for a penny. I'll send you all the information about one of the most fascinating businesses you can imagine. With these facts, you will make your own investigation. You will check up on conditions in your neighborhood. You will weigh and analyze the whole proposition. Then, and then only, if you decide to take the next step, I'll allow you to invest \$15.00. And even then, if you decide that your fifteen dollars has been badly invested I'll return it to you. Don't hesitate to send your name. I have no salesmen. I will merely write you a long letter and send you complete facts about the business I have found to be so successful. After that, you make the decisions.

Does Happiness Hang on Your Decision?

Don't put this off. It may be a coincidence that you are reading these words right now. Or, it may be a matter that is more deeply connected with your destiny than either of us can say. There is only one thing certain: If you have read this far you are interested in the kind of independence I enjoy. And if that is true, then you must take the next step. No coupon on this advertisement. If you don't think enough of your future happiness and prosperity to write your name on a postcard and mail it to me, forget the whole thing. But if you think there is a destiny that shapes men's lives, send your name now. What I send you may convince you of the truth of this proverb. And what I send you will not cost a penny, now or at any other time.

VICTOR B. MASON

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